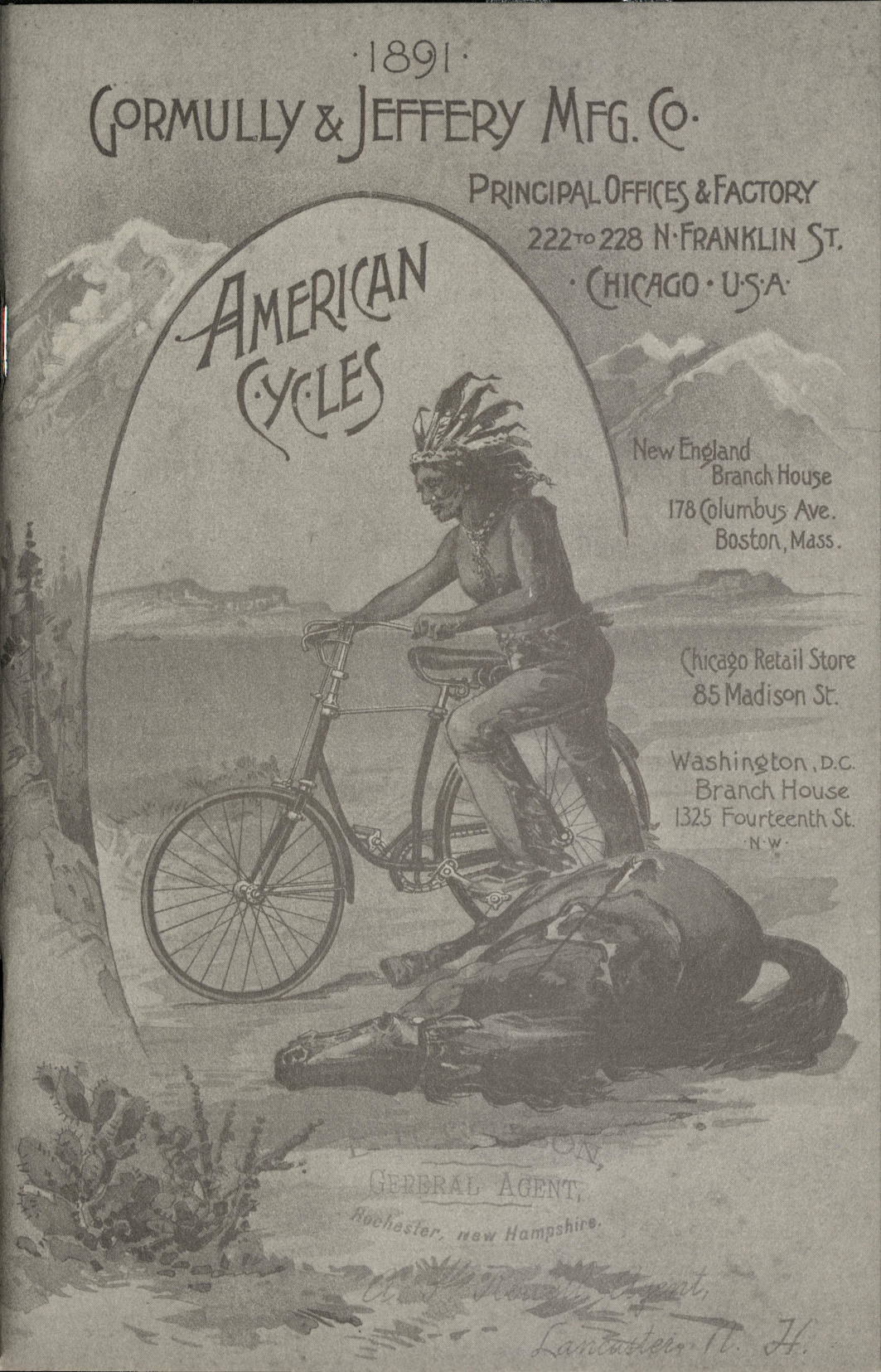
·1891·

GORMULLY & JEFFERY MFG. CO.

PRINCIPAL OFFICES & FACTORY
222 TO 228 N. FRANKLIN ST.
·CHICAGO·U.S.A·

AMERICAN CYCLES



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GENERAL AGENT,
Rochester, New Hampshire.

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POINTS TO BE REMEMBERED, 3D PAGE OF COVER.

Cabinet Photographs of any of our machines, 15 cents, postage paid.

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GUARANTEE.

WE WARRANT all of our BICYCLES and TRICYCLES to be free from imperfections in material and manufacture, and agree to make good, at any time within one year after purchase, any defects in them not caused by use, misuse or neglect. When such defects are claimed, the parts must be sent to us for examination, and whenever possible claims should come through the agent from whom the machine was purchased.

··· PREFACE ···

IT affords us pleasure to again greet the cyclists and prospective cyclists of America, and to submit, for their information and consideration, this, our eleventh annual catalogue. In the American Cycles we bring to them the embodiments of twelve years of extended experience, close study and undivided attention to cycle construction and perfection; the best results of skilled workmanship in a long established factory, designed, erected, equipped and used solely for the making of cycles and of an honest, unceasing effort to excel and to produce the best that money can buy and human ingenuity devise—an effort and result sustained by a reputation and guarantee excelled by none.

With the exception of the American Challenge and American Ideal Bicycles and American Ideal Tandem, we continue the same line of wheels as presented last year.

The AMERICAN LIGHT RAMBLER, which was placed before the public for the first time last season, met with phenomenal favor, and as the season advanced it was practically demonstrated that its reception and continued popularity was due to merit alone. Save in a few minor details it remains unchanged and will continue without a peer for strength, general utility and comfort.

The AMERICAN CUSHIONED RAMBLER is offered this season for the first time. It is substantially the American Light Rambler fitted with cushioned tires.

The AMERICAN LADIES' RAMBLER is also presented this season for the first time. It is intended to supply the want of a light machine for ladies' use, and as it embodies all of the essential Rambler characteristics, we feel safe in predicting that it will be outstripped by none in the race for public favor. It will be furnished with either cushioned or solid tires, as ordered, but unless otherwise specified cushion-tired machines will always be shipped. It will be noticed that while we present this wheel, all of our other safeties retain that desirable feature, convertibility.

The AMERICAN RAMBLER has already established itself, and for general, all-around usage on all kinds and conditions of roads, under any and all circumstances, it is without a superior.

The AMERICAN IDEAL RAMBLER has long since proven itself the best value for the money yet offered. It is this year presented with ball bearings to crank axle and pedals without extra cost.

The AMERICAN LIGHT CHAMPION, notwithstanding the extensive demand for safeties, enjoyed a most flattering sale last season, and is still offered as the highest grade ordinary bicycle made. We will this season be in position to supply Rational patterns of this machine fitted with cushioned tires, when ordered.

The AMERICAN CHAMPION continues to merit its name and remains the standard roadster the country over.

The AMERICAN IDEAL and CHALLENGE TRICYCLES and the AMERICAN CHALLENGE TANDEM are still called for, and, giving excellent satisfaction, they are continued without alteration of any kind.

Much has been said, and much more written, relative to cushioned tires, but at best the tire is an experiment, and we prefer to wait a year's practical trial before expressing any decided opinion for or against. That there will be some demand for the tire there can be no doubt, and to accommodate those who are willing to "try the experiment," we offer the American Cushioned Rambler, the American Ladies' Rambler and the American Light Champion (Rational pattern only) fitted with these tires.

To sundries we are paying as much attention as ever, having enlarged the department to meet a constantly increasing trade. We direct particular attention to our line of lamps, as being worthy of special notice, comprising, as they do, many new ideas as the result of continued experiment.

In conclusion, we invite fair and impartial criticism from the public, and any information not contained in these pages will be cheerfully furnished on application.

GORMULLY & JEFFERY MFG. CO.

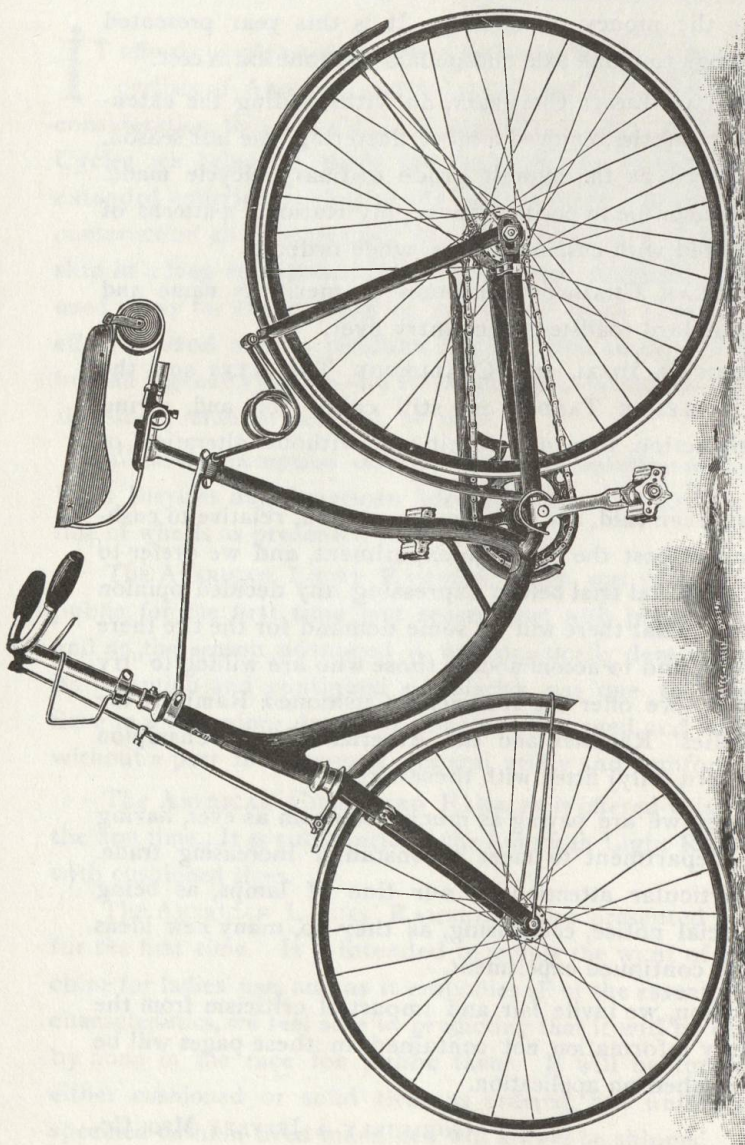

FIG. 1.

AMERICAN LIGHT RAMBLER.

(FOR GENTLEMEN.)

Price, Standard Finish, $135.00 **Half Nickeled, $150.00** **Full Nickeled, $160 00**

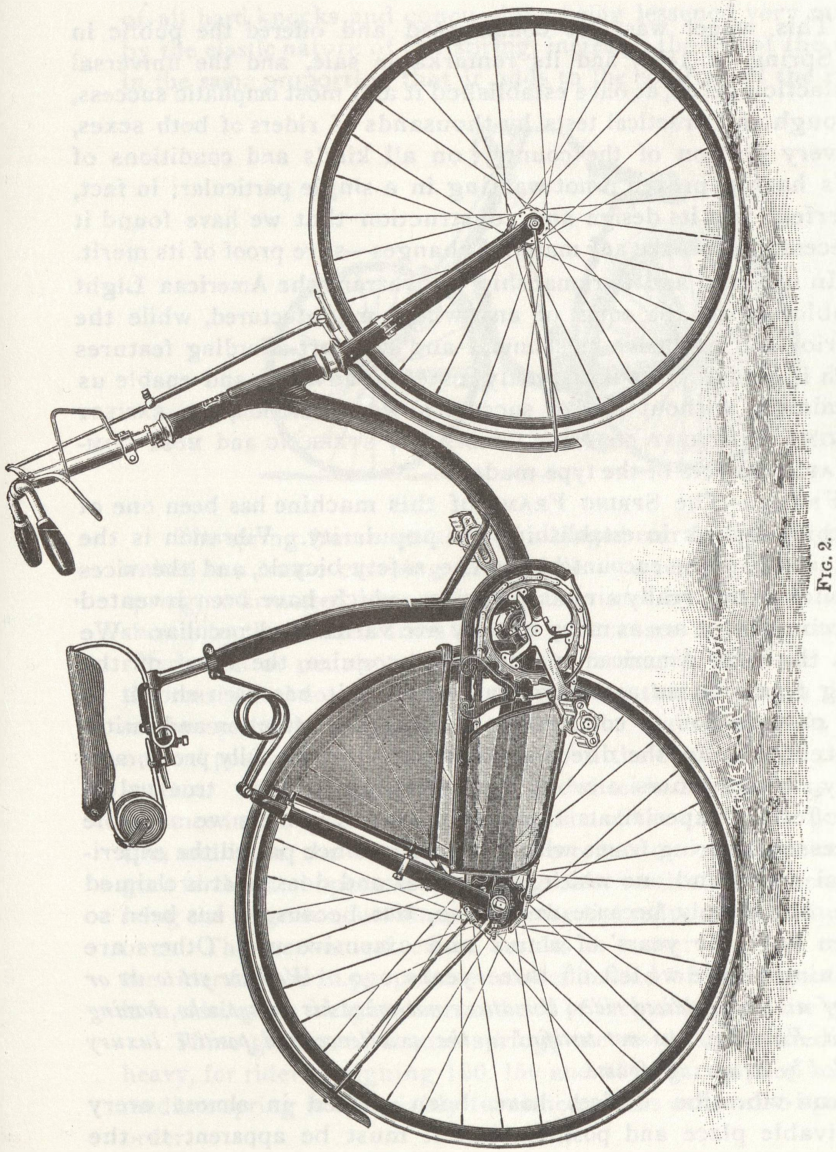

FIG. 2.

AMERICAN LIGHT RAMBLER.

(FOR LADIES.)

Price, Standard Finish, $135.00 **Half Nickeled, $150.00** **Full Nickeled, $160.00**

AMERICAN LIGHT RAMBLER.

This wheel was first constructed and offered the public in the Spring of 1890, and its remarkable sale, and the universal satisfaction given, at once established it as a most emphatic success, thorough and practical tests by thousands of riders of both sexes, in every portion of the country, on all kinds and conditions of roads having proved it not wanting in a single particular; in fact, so perfect was its design and construction that we have found it unnecessary to make any material changes—sure proof of its merit.

In material and workmanship we warrant the American Light Rambler to be the equal of any wheel manufactured, while the superior and exclusive mechanical and comfort-affording features which it enjoys place it distinctly a step in advance, and enable us to claim it, without fear of successful contradiction, the EASIEST RUNNING, FARTHEST COASTING, STEADIEST STEERING and MOST COMFORTABLE bicycle of the type made.

FRAME.—The SPRING FRAME of this machine has been one of the chief factors in establishing its popularity. Vibration is the greatest evil to be encountered in the safety bicycle, and the vices (for such some really are) and devices which have been invented to circumvent it are as many as they are varied and peculiar. We were the first American makers to recognize the value of the spring frame as an anti-vibrator, and that it has been shown to be a *sine qua non* to comfortable cycling, the attention and imitation centering in the direction of spring frames fully prove, and to-day, while others are but just awaking to their true value, and offering experiments therein, in our Ramblers we are able to present a spring frame which has long since passed the experimental stage, and one which is practical and does what is claimed for it, not simply because we say so, but because it has been so proven by three years' of actual and extensive use. Others are beginning where we left off three years ago. *We have yet to see or hear of an unprejudiced rider, it matters not what his mount, who, having tried a Rambler, has not testified to the excellence and positive luxury afforded by its spring frame.*

Anti-vibration devices have been placed in almost every conceivable place and position, but it must be apparent to the thinking person that four-fifths of the rider's weight being sustained by the rear wheel, that there must vibration be most harmful, and there the greatest necessity for a preventive exist.

It will be noted that Ramblers not only have the right thing, but have it in the right place. The relation of such a practical spring frame to the durability of the machine is also apparent, the force of all hard knocks and concussions being lessened very materially by the elastic nature of the spring, increases the life of the machine in the same proportion that it adds to the comfort of the rider.

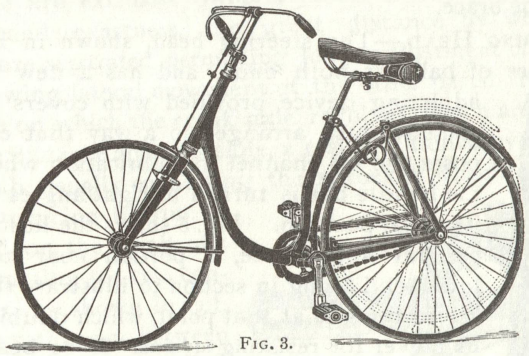

FIG. 3.

The spring frame consists of a hinged rear fork and rear wheel, united to a frame carrying the saddle by a tempered and yielding spring, so arranged that an obstruction met by the rear wheel (as shown by the dotted lines in the cut) causes no elevation of the rider's seat or pedals; similarly a depression in the road allowing the rear wheel to drop, does not produce that effect on the rider, as the spring, by expanding, permits the main frame to retain a normal position, largely independent of the condition of the road's surface. This spring action of the wheel is doubtless as great an advance in the cycle art as the adoption of the rubber or pneumatic tire, and is for the same object, the reduction of vibration; but it goes farther and operates through greater vertical distances, neutralizing the large concussions, while the tire reduces only the smaller ones. The mechanical effect results in conserving the energy of the rider for use in propulsion alone, instead of greatly expending it in raising his weight over and out of inequalities in the path.

Three grades of frame springs are used, light, medium and heavy, for riders weighing 120, 150 and 180 lbs., respectively. The medium spring is invariably furnished unless otherwise specified in order.

The main portion of the frame, including backbone and front fork, is of the finest seamless steel tubing, the hollow construction being so continued through every joint as to reduce every grain of

weight without a sacrifice of strength. The two upper ends of the backbone are braced by a horizontal tube, so attached that a rider desiring to use the side mount or intending to give the machine careful usage, can remove it without trouble, but we do not advise its removal, and wish it understood that our guarantee will not cover breakages traceable to the use by gentlemen of the machine without the brace.

STEERING HEAD.—The steering head, shown in Fig. 4, turns on a series of balls at both ends, and has a new and unique adjusting device provided with covers to exclude dust, arranged in a way that exposes the oil channel for lubrication when the handle bar is turned at right-angles to its usual position. Fig. 5 shows the head's general appearance, a portion near the lower end being in section to illustrate the reinforcement at that point, which doubles its power for resisting strains. Long bearing distances, that is, the distance by which the bearings are separated, is a feature peculiar to our wheels, the wisdom and desirability of which is best shown in the ball bearing head where the space between the series of balls is double that of average steering heads. This feature makes the joint extremely rigid sideways, yet perfectly free to turn. It exceeds the usual short joints in durability, as two hinges on a door are superior to one and in the same manner serves to steady the steering, exactly as a door with two hinges, one near the top and the other near the bottom, will be much less erratic than a door with one hinge, or with but an upper hinge and fitting into a cone at the lower end, or than one with two hinges placed close together. The manner of adjustment of this ball head deserves attention, as it requires no lock nut, and can be instantly changed to be tight or loose by the moving of a single clamp screw.

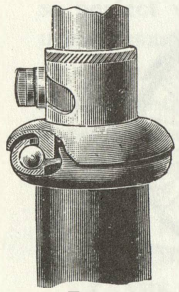

FIG. 4.

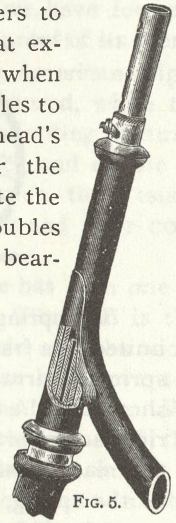

FIG. 5.

HANDLE BAR.—The handle bar is made of one piece of three-fourths inch seamless steel tubing, reinforced by a supplementary tube inside. The bar is fastened to the socket, which is also of seamless steel tubing, by having the top of the socket enlarged so as to permit of the bar being fitted in and then wrapped around it and brazed. The socket is of such length and construction that it admits of a greater range of adjustment of handle bar than

others in use. The handles are of hard rubber and afford a firm and comfortable grip.

BRAKE.—The brake is strong and positive in action. The lever is curved to follow the contour of handle bar and the connections are such as allow of easy and perfect adjustment.

BEARINGS.—The bearings are made under the Smith patent, of which we are exclusive owners. They are constructed with great care and exactness, the great distance by which their extremities are separated permitting loose adjustment of the balls without allowing lateral movement of the other parts. Noticeably the bearings on which the crank axle revolves, which are placed at the extreme distance apart possible, a result obtained by dispensing with the hub usually connecting the sprocket wheel to the crank shaft, and securing its rim to arms forged on the crank, one connection acting for two connected parts, as shown in cut, and locating the rim between the bearing extremities in a manner which permits the force of the chain being received within the bearing instead of outside of it, avoiding thereby excessive strain on either set of balls. The balls are of the finest steel, perfectly spherical, and gauged to the 2000th part of an inch.

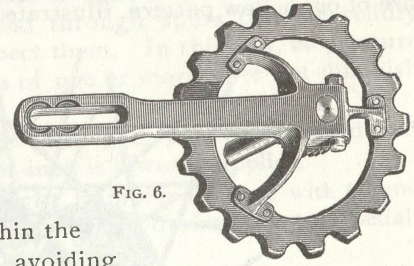

FIG. 6.

WHEELS.—Perfect construction does not excuse defective design. A serious defect in most safeties, which is avoided in the Ramblers, is in having both wheels of equal size, or the steering wheel larger than the driver—principles quite at variance with the interests to be served, and with all of the most reliable authorities and methods of modern vehicle construction. On a properly designed safety bicycle it is not possible to distribute the rider's weight equally on both wheels, four-fifths of it being carried on the driving wheel, hence it is apparent that with the little weight on the front wheel, a large diameter, no matter how beneficial for the driving wheel, is of insignificant advantage to the steering wheel, while on the other hand, and without corresponding benefit, it increases the weight and bulkiness, which counts heavily against the rider in the handling of the wheel and in hill climbing. The small steering wheel, on the contrary, not only avoids these disadvantages, but also permits of the use of a long head and of the long bearing-distance feature being observed in the head, which, as

we have explained, not only strengthens both head and fork, but contributes very largely toward making the Ramblers what they undoubtedly are, the steadiest steering safeties extant. Much of the rider's energy is unconsciously expended in overcoming the "sensitiveness" peculiar to the steering of most safeties, and anything which will serve to counteract or lessen the peculiarity will, it is manifest, add very appreciably to the comfort and capabilities of the rider; this the small steering wheel, long head, and the extreme bearing distance between the head bearings of the Rambler does most admirably.

The wheels of the Light Rambler are 30 and 26 inches in diameter, and have true tangent spokes of heavy, tough, doubly butt-ended wire, secured by large, well-threaded nipples to the rims. The RIMS are of our hollow pattern, illustrated and described on page 25.

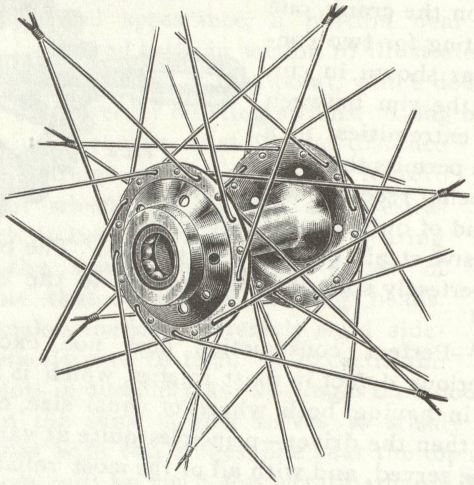

FIG. 7.

The HUBS are of steel, with a single row of balls in each end, set in hardened cases in a manner which prevents their escaping when the wheel is removed for cleaning, and fitted to the forks by means which admit of easy adjustment.

TIRES.—The tires are of the best antimony-vulcanized, three-fourths inch Para rubber, moulded without a joint.

CRANKS.—The cranks are of drop forged steel and have an extreme throw of six inches—an inch less than that adopted by other manufacturers. A longer crank, repeated experiment has proven, is a serious drawback where comfort or speed on a level is desired, and that the Rambler can compete successfully in hill

climbing and other tests with safeties having cranks which compel riders to lift their feet two inches higher at every revolution is proof positive of the excellence of its bearings and the benefits resulting from the use of the small steering wheel.

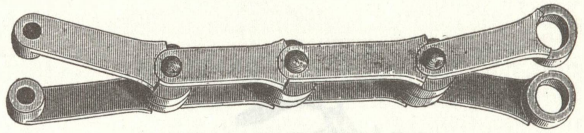

FIG. 8.

CHAIN.—The Rambler chain we believe to be the equal, if not the superior, of any in use. Its links, formed from steel forgings, are dependent for tensile strength and uniformity of length in no way on the rivets, which unite one side of each link with the other, but transmit power from end to end through spurs that are solidly forged on the sides which connect them. In this way, no pressure comes on the rivet and the loss of one or more does not diminish the strength of the chain.

GEARING.—48, 54, 60 or 66 inch gear can be furnished, but unless otherwise specified the 54-inch is always supplied.

PEDALS.—The American Light Rambler is fitted with Champion ball pedals (see page 47), but when desired, rat-trap pedals will be substituted without extra charge.

SADDLE.—Another part which contributes very materially to the rider's comfort is the saddle. Realizing this, we tested every saddle known to the market and a number which have never been shown for sale, and the Rambler saddle described on page 40, and used on this machine, is the result. The saddle post is enlarged and hollow, vertically and horizontally, giving ample opportunity for adjustment in both directions.

WEIGHT.—The Light Rambler weighs 50 pounds.

When the machine is ordered for ladies' use it is furnished with the Rambler saddle of reduced length and with dress guards instead of brace, the backbone being guaranteed sufficiently strong to meet a lady's requirements. If the brace is also wanted, it will be supplied at an extra cost of $2.50.

A child's seat and attachment is made for this and other makes of safety. For particulars, see page 43.

All parts of the Standard finished bicycles are finished in jet black enamel, except the head, saddle spring, handle bars, brake, cranks and pedals, which are polished and nickel-plated.

All bicycles are provided with a set of solid steel wrenches, and also a nickel-plated oil can, contained in an improved, easily-reached tool bag.

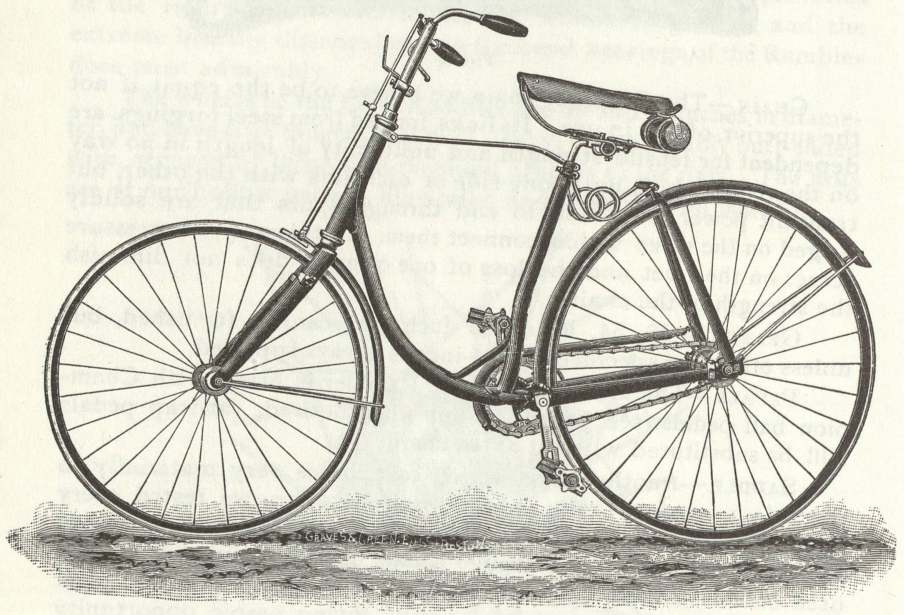

FIG. 9.

AMERICAN RAMBLER.

PRICE, Standard Finish, $125.00

Half Nickeled, $140.00 **Full Nickeled, $145.00**

AMERICAN RAMBLER.

Three seasons' use by many thousands of expert and inexpert riders has thoroughly and practically demonstrated that for use on heavy roads, and as an all-around roadster, the American Rambler has no superior.

Although sold for less, it is constructed with the same care and embodies all of the salient features of the American Light Rambler. The description of the one will apply to the other, except in the following particulars: The front and rear forks of this machine are of the same seamless steel tubing, but one gauge heavier, and the tires are one-eighth inch thicker than those used in the Light Rambler; the saddle post is solid instead of hollow; the rims of the wheels are of our semi-hollow pattern (see page 31), and direct, butt-ended spokes are used instead of tangent.

By making these alterations we are enabled to reduce the price and place this high-grade, spring frame safety near to that of inferior machines made without its comfort-affording features.

The Rambler weighs 54 lbs. with all parts on, including pedals, chain guard and tool bag. This weight we believe to be lower than that of any other spring frame roadster safety, with ⅞ tires, before the public.

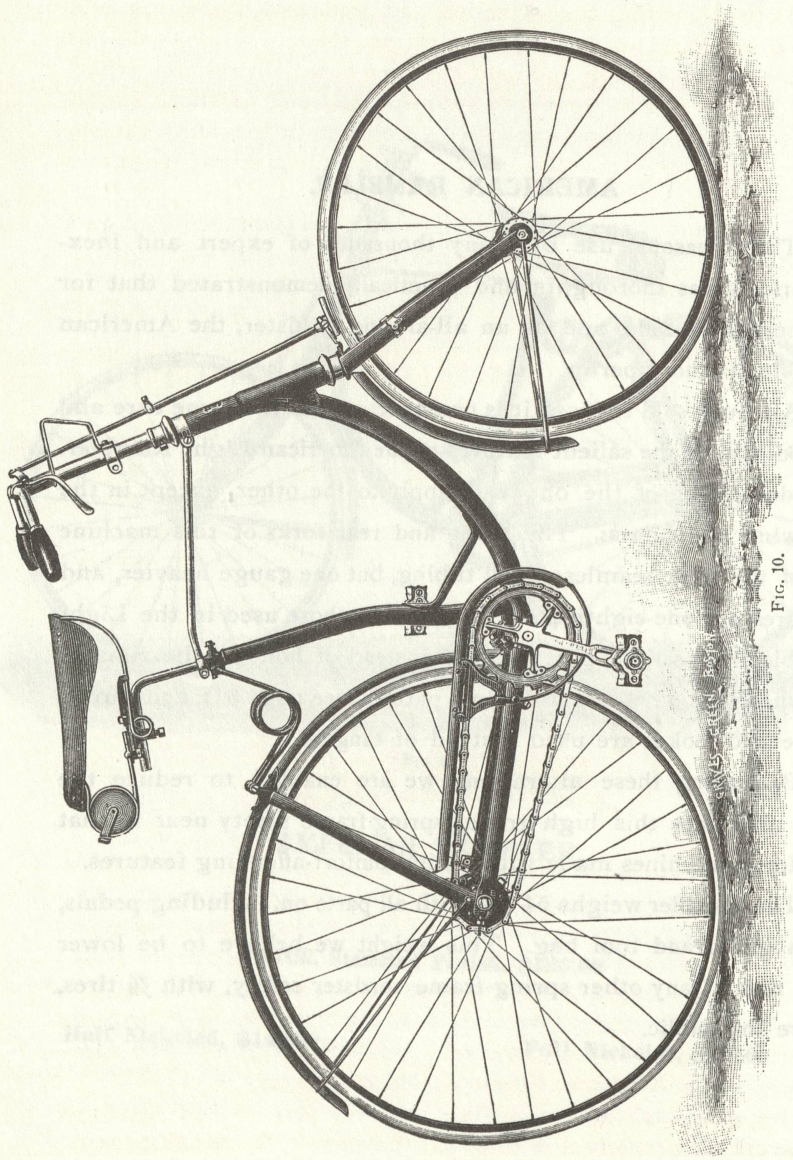

FIG. 10.

AMERICAN CUSHIONED RAMBLER.

Price, Standard Finish, $145.00 **Half Nickeled, $160.00** **Full Nickeled, $170.00**

AMERICAN CUSHIONED RAMBLER.

Notwithstanding the extended and prolonged discussion relative to cushioned or hollow rubber tires, the fact remains that all which has been written and said has been based entirely on experiments of less than a year's duration. The result of these experiments and the opinions expressed have been of a widely varying nature, and have succeeded only in leaving the matter in an undeveloped state.

The advent of the cushioned tire in this country being of such recent date, and its trial so extremely limited, at this writing practically amounting to nothing, definite or reliable advice or information as to its real value can be offered by no one. That it absorbs a small amount of vibration in rigid frame machines is apparent, but that it cannot be of equal value to spring-frame safeties, such as the Ramblers, is also quite plain. Many riders who have tried cushion-tired machines, however, incline to the opinion that whatever the tire's advantage in reducing vibration, it is minimized by the increased muscular effort required to overcome its tendency to adhere to certain road surfaces. Aside from this, the tire is liable to crack and burst, both inside and out, after a few months' continuous use, being then costly to replace.

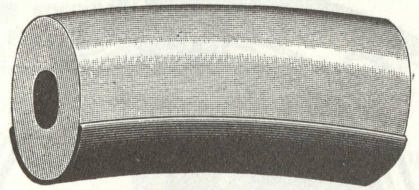

FIG. 11.

As there is more or less demand for cushion-tired wheels, however, we this year present the American Cushioned Rambler. It is substantially the same as the American Light Rambler. One and one-fourth inch cushioned tires are used; the rims are of rolled sheet steel of a single thickness, made by special tools for the purpose; the saddle supporting rod is solid, and the mud guards are of large pattern. In all other respects the descriptions and specifications of the American Light Rambler will apply.

We guarantee this machine in every part except the tires. These are the best which money can procure. The manufacturers assure us of their durability, but more than this we cannot say until a year of actual use has given practical demonstration of the fact.

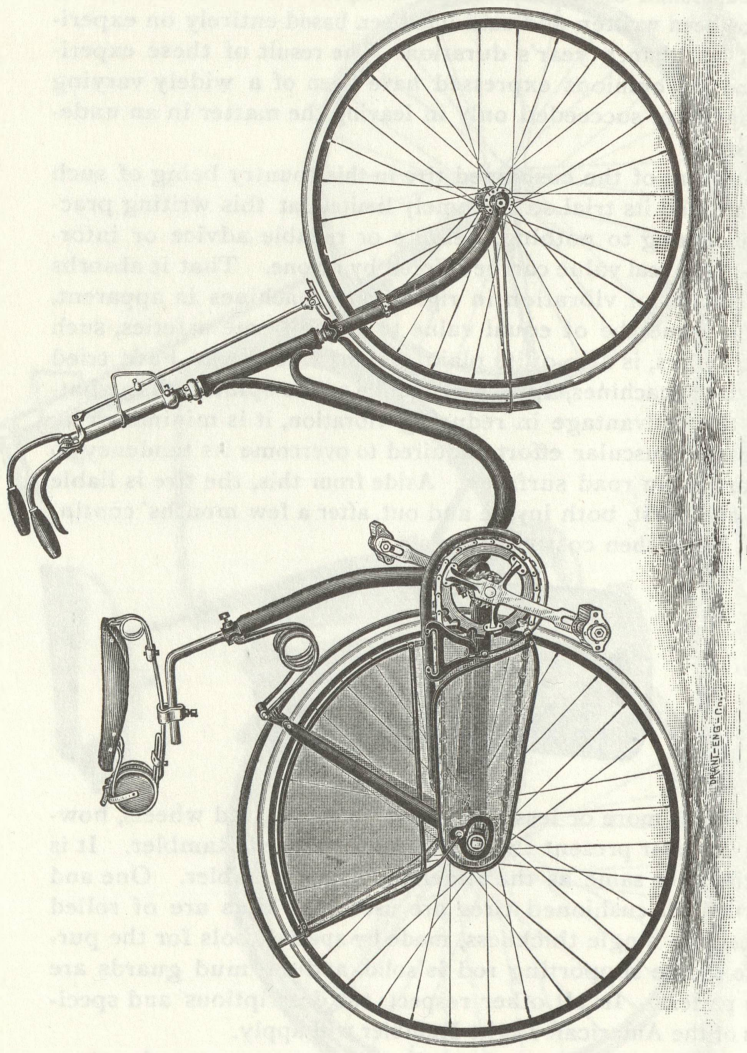

FIG. 12.

AMERICAN LADIES' RAMBLER.

Price, Standard Finish, $125.00 Half Nickeled, $140.00 Full Nickeled, $150.00

AMERICAN LADIES' RAMBLER.

A desire to respect the wishes of those ladies of light and medium weight, who, residing in cities or sections of the country where good roads or boulevards abound, find the American Light Rambler larger and heavier than they require, has led us to present this season, for the first time, the American Ladies' Rambler, which we believe—nay, know—will speedily occupy a place in the world of wheels second to none.

Although listed at a lower price, and weighing considerably less, this wheel retains the spring frame, small steering wheel, long bearing distances and all of the other essential features of the American Light Rambler, the same care in construction and excellence in material being rigorously observed.

FRAME.—The main portion of the frame is of seamless steel tubing in one piece from steering head to seat stem. The front forks and rear frame are also of seamless steel tubing, but of a smaller size and thinner gauge than that used in the American Light Rambler. The spring frame and hinged joint are similar to those of the other Ramblers. Two grades of frame springs are used, light and medium, for riders weighing 110 and 140 pounds, respectively. Machines are always fitted with the lighter spring unless otherwise specified.

STEERING HEAD.—The steering head is of new design and turns on a series of balls at each end, the long-bearing distance feature being observed here as in our other safeties.

WHEELS.—The driving wheel is 28 inches in diameter, the steering wheel, 24 inches. They have true tangent spokes and crescent rims.

TIRES.—Both wheels are fitted with *one inch cushion tires*, but when desired, hollow rims and three-fourths inch solid tires will be substituted without extra charge.

HANDLE BAR.—The handle bar is of one continuous piece of seamless steel tubing, and is of new design, being turned upward and inward, somewhat similar to the ram's-horn bar, affording more room in which to mount than does the usual single curved bar. The handle bar is also adjustable to height. The handles are of hard rubber and of approved shape.

DRESS GUARDS.—Great care has been used in providing sufficient and correctly shaped guards for protecting the rider's costume. Both wheels have, of course, suitable mud guards, and the chain and driving wheel are completely covered by dress guards

made of fine wire cloth, leaving no possible chance for the rider's skirts to be caught by spokes or chain.

PEDALS.—A reduced pattern of the Champion ball pedal is used—reduced, of course, to accommodate a smaller foot.

SADDLE.—The saddle has been specially designed for, and is particularly well adapted to, ladies' use. It is of moderate length, and capable of yielding downward at both ends, and of being tilted to adjust the inclination of the leather surface. It has a wide range of adjustment from or toward the handles, and for increasing or diminishing the elasticity of the ends.

GEARING.—The Ladies' Rambler is geared to 54 inches, but for hilly sections a lower gear of 48½ inches can be furnished, if desired.

WEIGHT.—The American Ladies' Rambler weighs, with all guards and fittings on, 45 pounds.

The BRAKE, BEARINGS, CHAIN, CRANKS, and all other parts not described here, conform to those used on the American Light Rambler.

CONCERNING CYCLE MANUFACTURE.

In making machinery of any kind in an extensive and thorough manner, absolute perfection in quality and dimensions of the several parts is nearest approached by the successful manufacturer whose efforts are prompted mainly by a desire to reduce the expense of assembling, and, incidentally, for convenience in repairing. For these reasons our productions are made of accurate dimensions in all details; every piece being a duplicate of the corresponding part in all machines, resulting in what is called interchangeability of construction. To do this, the great expense for gauges and other instruments for accurate measurement is more than offset by the reduction in cost of setting together, and enables us to warrant and agree to replace any part ordered for repairs that does not exactly fit the place intended. The steel in these parts, too, is justly claimed to be superior to that commonly used, being prepared without excessive heat and with its original percentage of carbon unchanged, our factory fortunately being located at a point where mineral oil, direct through pipes from Nature's storehouse, is available for practically unlimited use. The adaptability of this fuel is taken full advantage of in our works, reducing the cost of all steam producing, forging, brazing, tempering and enameling operations, and in each of the processes named contributing to a better result in the finished product, by leaving less scale on the surface and altering less the original elements contained in the selected steel employed. The enameling processes are conducted without danger of dust or ashes being deposited, and the heating is done at a very uniform, constant temperature, the gloss and evenness of the surfaces, temper of the steel and strength of the brazed joints of this season's productions being remarkable examples of the superiority of oil fuel as an aid in high-grade bicycle construction.

OUR FACILITIES.

We have spent a very large amount of money in perfecting our plant and equipment. We make every portion of our machines except the tires. We import the weldless steel tubing in STRAIGHT LENGTHS, which is then tapered and bent by our own special machinery. We make nearly all our forgings, do all of our leather work, and all of our nickel-plating and enameling, nothing being done for a contract price, skillful workmanship being required at any cost.

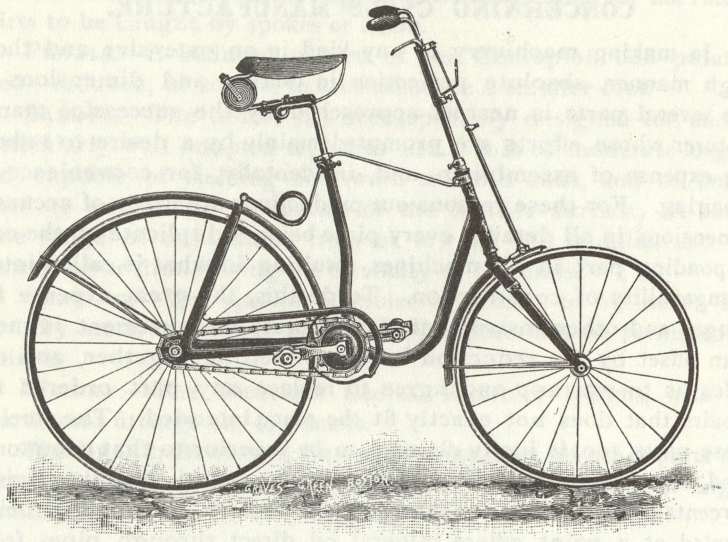

FIG. 13.

AMERICAN IDEAL RAMBLER.

(FOR BOYS.)

PRICE, Standard Finish, $65.00

Half Nickeled, $80.00 **Full Nickeled, $85.00**

Wherever introduced this little wheel has speedily established itself as the best value for the price ever offered. As shown by the cuts, it is adapted to both boys and girls, and follows closely the model of the larger Ramblers, retaining most of their valuable features.

It has ball bearings to both wheels, to the crank axle and to the pedals.

The front fork turns in hardened bearings, having a long space between them to insure rigidity in position with freedom of movement for turning.

The rear fork, hinged to the forward frame, is made of semi-hollow pattern in sheet steel, and, with the rear brace, forms one piece of suitable strength and very light in weight.

The forward or main frame is of seamless steel tubing in one piece from the steering head to the seat post. The latter is adjustable to height. The handle bar is similarly adjustable to height.

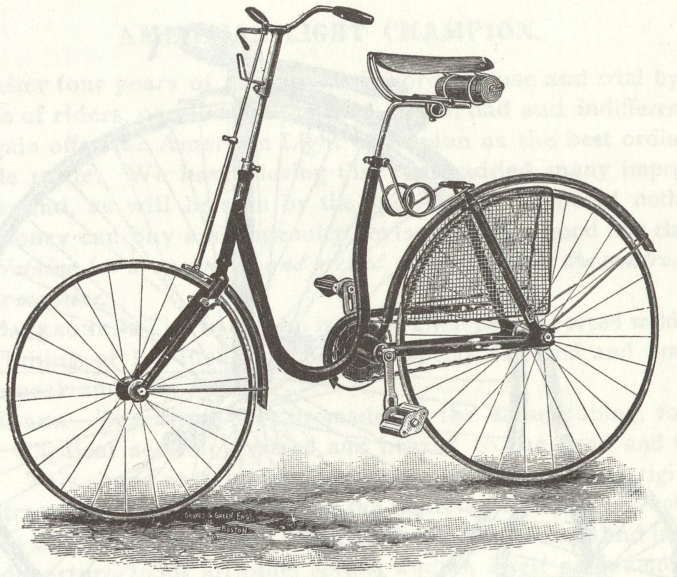

FIG. 14.

AMERICAN IDEAL RAMBLER.

(FOR GIRLS.)

PRICE, Standard Finish, $65.00

Half Nickeled, $80.00 **Full Nickeled, $85.00**

The driving wheel is 26 inches in diameter, with ¾-inch tire. The steering wheel 22 inches in diameter, with ¾-inch tire. Both have strong, doubly-butted direct spokes, easily replaceable when necessary.

The cranks are adjustable from 4 to 5½ inches, and are detachable. The gearing is so arranged that one revolution of the crank propels the machine the same distance that would be covered by one revolution of a 48½-inch ordinary—substantially 12½ feet. The regular drop-forged Rambler chain is used.

Unless otherwise specified, the machine is furnished with horizontal brace and without dress guards. When both brace and dress guards are ordered, the extra charge is $2.00.

The Ideal Rambler weighs 42 pounds, and although originally intended for boys and girls, has found great favor with ladies of light weight, and proven fully up to all the requirements of their use.

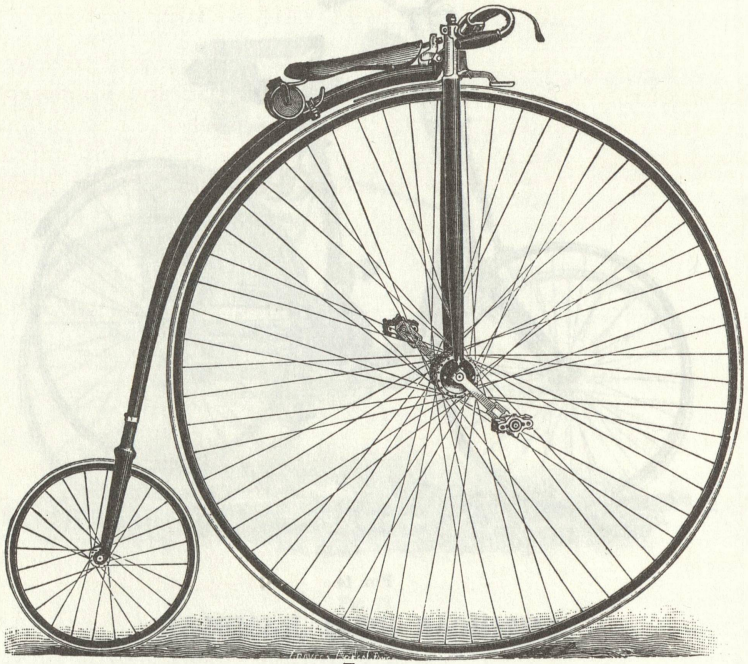

FIG. 15.

AMERICAN LIGHT CHAMPION.

Diameter of Front Wheel.	Length of Leg, inside measure, to Sole of Foot.	Price, Standard Finish. Per Specification.	Price, all parts Nickeled except Wheels.	Price, full Nickeled including Wheels.	Weight.
48	31½	$115 00	$120 00	$128 00	39
50	32½	117 50	122 50	130 50	39½
52	33½	120 00	125 00	133 00	40
54	34½	122 50	127 50	135 50	40½
56	35½	125 00	130 00	138 00	41
58	36½	127 50	132 50	140 50	41½
60	37½	130 00	135 00	143 00	42

If full-nickeled spokes are desired with the Standard finish or half-nickeled bicycles, the cost will be, additional, $3.50. If desired with Perfect-Fit Handles (see page 51), extra, $2.50.

The American Light Champion will be furnished in sizes below 48-inch at the same price as the 48-inch.

The American Light Champion will be furnished with our semi-hollow rim (see page 31) at $10 less than above prices.

For Rational pattern and Cushion tired wheels see page 28.

AMERICAN LIGHT CHAMPION.

After four years of practical and thorough use and trial by all classes of riders, on all sorts of roads—good, bad and indifferent—we again offer the American Light Champion as the best ordinary bicycle made. We have, during this time, added many improvements, and, as will be seen by the specifications, spared nothing that money can buy and ingenuity devise to make good our claim.

Nothing but drop forged and pressed steel is used in the construction of this machine.

BACKBONE.—The backbone is of the choicest imported weldless steel tubing of 1½ inches diameter, properly tapered and brazed to the neck and rear fork.

FORKS.—The front fork is made of the same tubing, rolled to an elliptical section, tapered and brazed to the head and fork ends. This shape and quality of material insures extreme rigidity and strength. The rear fork is of the modern shell or semi-hollow pattern of heavy sheet steel. Our fork end is a radical and ingenious departure from all other forms, and in itself an example of the care and ingenuity displayed in the design and construction of our machines. It has, of course, our self-aligning principle, without which an easy-running wheel, in all that the term implies, is impossible, and which is one of the secrets of the easy-running qualities peculiar to our wheels. The fork end is also distinguishable from all other patterns by its extreme lightness, a point that will be appreciated by those conversant with the amount of metal used in the average hollow fork end, both inside and out. In ours there is no metal in the inside at all, the end being entirely open, thus dispensing with the air-hole within most forks, and permitting any superfluous brazing substance, arising from joining the head, to escape, so that nothing can remain in the fork to cause it to rattle. The parts forming the actual fitting are for the most part of hot pressed sheet steel made in expensive dies. A forged steel brace connects them and holds the ball-bearing case. These cases are placed ½ inch further apart than is customary, and this has been accomplished without increasing in any way the length of the shaft or the distance between the pedals, and our well-known narrow tread is retained. The results we have attained in this new fork end may be briefly described as follows, viz.: We

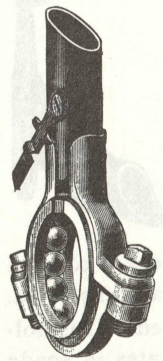

FIG. 16.

have increased the distance between the bearings, reduced the weight, avoided the danger of rattle, and have given more room for reaching the adjustable parts without introducing a single unfavorable point.

NECK.—The neck, as shown by cut, is made in conformity with one of our latest patents. It is constructed of the toughest steel obtainable, and has its cylindrical fitting in the backbone tube extended rearwardly a greater distance on the lower side than other manufacturers consider necessary, with its upper side much shortened. The entire cylinder is bored out, leaving the metal one-tenth of an inch thick at its sides and end. This boring reduces the weight of the neck five ounces and does not diminish its strength, but on the contrary positively increases the strength of the backbone, both by lessening the weight and force of the blows which the neck imparts to the backbone, as well as relieving the backbone of any exact rigid ending at the juncture of the neck and tube, which in all other forms causes the part immediately back of the neck forging to be the weakest part of the structure, instead of being, as it should be, the strongest.

The tendency of the socket screw or center screw to wear oval is quite a fault in most wheels. We avoid it by the use of a split sleeve or thimble which enters and forms part of the socket screw, and which is so made that it cannot rotate with either the neck or socket screw, but is yet capable of adjustment in the ordinary manner. The cut accompanying shows the thimble and socket screw removed from each other and from the neck. The latter is of an improved form provided with oil ducts, and we fully believe superior to any neck we have ever seen.

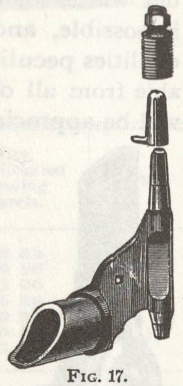

FIG. 17.

The sockets are hardened steel, and the adjustable one requires no extension above to take the jamb-nut, but is better secured by clamping its sides, resisting all tendency to loosen or move sideways in its threaded fitting. The opening for the neck is covered by a neat dust-shield. The leg guard is of steel, and carefully fitted.

HANDLE BAR.—Our patent ram's-horn bar is used. It is hollow, of one piece throughout its length. It terminates in spade grips with all the advantages of the spade handle, but without its disadvantages, and is stronger and lighter, is adjustable to length of arms, has a better rest for the hands in steering and a better support for the legs in coasting, and is fastened by our patent clamping

process, as shown in cut. This makes it readily interchangeable for cow-horn bars, with spade handles, which will be substituted when desired. By this means of fastening it can be easily removed

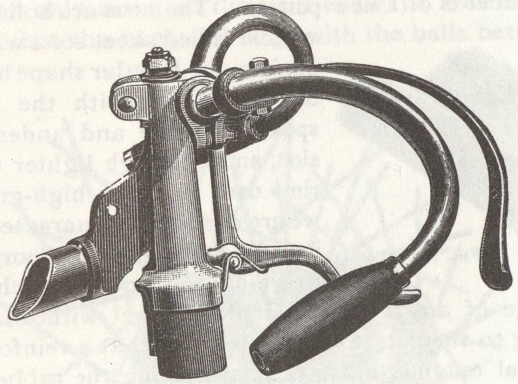

FIG. 18.

for storage, shipment, or for repairs. We might further add, from our experience in the past, that this fastening and bar have *no superior*. We would call attention to our Perfect-fit Handles, which were made especially for this bar; with them riding is the perfection of comfort. (See page 51 for full description.) The additional charge for them is $2.50.

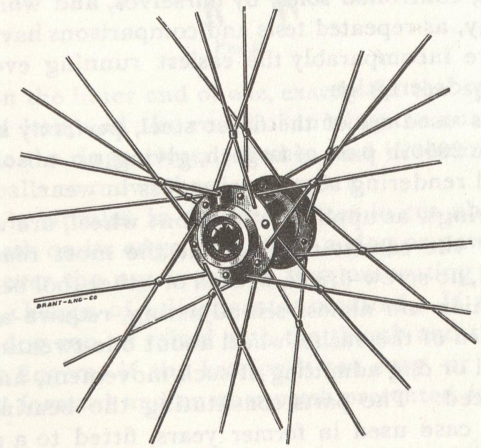

FIG. 19.

WHEELS.—The wheels have true tangent spokes of heavy, tough, doubly butt-ended wire, secured by large, well-threaded

nipples to the rims. The rear wheels of machines of 52 inches and above are 17 inches, and on smaller sizes, 16 inches in diameter. The HUBS, shown on preceding page, are of pressed steel, and that of the front wheel is of a new pattern. The RIMS are hollow and made of cold rolled sheet steel with a smooth surface, the tubular shape being formed and completed with the nipples and spokes in place and under proper tension, and although lighter than hollow rims used in other high-grade wheels, we are enabled to guarantee that, with its axle resting on a floor, four men, weighing 150 pounds each, can stand on the edge of any Light Champion wheel without bending it. By referring to the cut, it will be observed that a reinforcing thickness of metal extends along each, protecting the rubber as well as the rim from injury on the road.

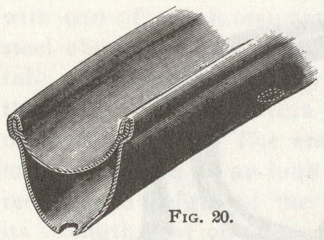

FIG. 20.

TIRES.—The tire of the front wheel is ⅞ inch and of the rear ¾ inch wide, of the best Para rubber obtainable, vulcanized with antimony, which produces the red color and prevents the rubber from hardening with age as is the case with the lead and sulphur compound used in black rubber.

BEARINGS.—The bearings are of the well and favorably known Smith patent, controlled solely by ourselves, and which we do not hesitate to say, as repeated tests and comparisons have proven, and will prove, are incomparably the easiest running ever fitted to a bicycle of any description.

The balls used are of the finest steel, perfectly spherical, and gauged to the 2000th part of an inch, giving an absolute accuracy in fitting, and rendering absolute evenness in wear.

The bearings, as applied to the front wheel, are without question not only the easiest running but the most readily adjusted ever designed, no screw-driver, wrench or other tool being required. The parts which are almost self-adjusting, require after a year's wear but a turn of the rachet-wheel about one-twentieth of a revolution, a pawl or dog admitting of such movement, and securing it wherever placed. The parts constituting the bearing consist of the spherical case used in former years, fitted to a globe-shaped cavity at each of the fork ends, and containing an annular groove for the balls which also forms an oil chamber. The balls roll in this chamber and on the curved edges of hard steel rings or sleeves that are fitted to the shaft. The rings are arranged to revolve only

with the shaft, the outer one supported by the crank and the inner one by a nut, the back of which bears against the hub; the nut has threads conforming to the screw cut on the inner ring or sleeve; this sleeve can only move on the shaft endways, and the parts are of such size that the two steel rings with the balls between them,

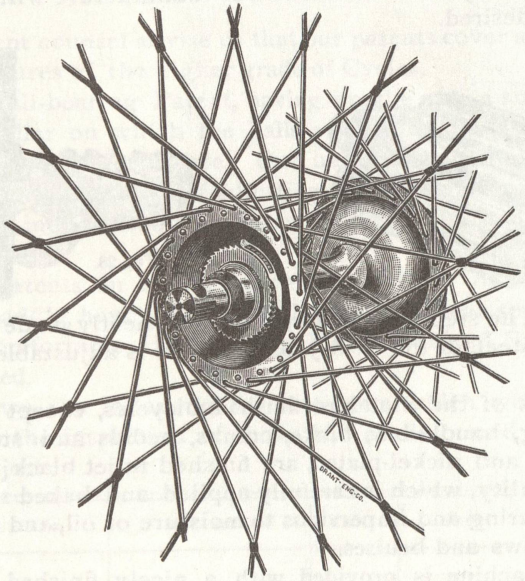

FIG. 21.

and the nut on the inner end of one, exactly fill the space between the crank and hub, and the result of turning the nut in one direction is to force the rings closer together, and in the other direction to allow the balls to move the sleeves apart.

The nut is circular in outline, as seen in cut above, and provided with teeth on its edge, into which a dog or pawl is arranged to drop whenever the nut is moved, thus preventing any displacement until a change of adjustment is required. If the bearing is too tight the dog can be raised with the thumb and the nut moved back with the fingers; if the bearing is too easy, or loose, the nut can be turned forward and another notch presented for the pawl to spring into.

CRANKS.—The Cranks are of drop-forged crucible steel, of our own special and patented design, with three recesses for adjustment and secure attachment of the pedals. The choice of two sizes is given. With our very easy-running wheels the medium

crank adjustable from 5¼ to 4½ and 3¾ inches is on 50 and 48 inch bicycles, but the large crank adjustable from 6 to 5¼ and 4½ inches will be supplied on bicycles larger than 50 inches.

PEDALS.—The Champion Ball-Pedal (see page 47), is used.

SADDLE.—The Wonder Saddle is furnished unless otherwise specified, but any other saddle of our manufacture will be substituted when desired.

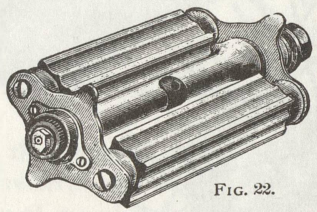

FIG. 22.

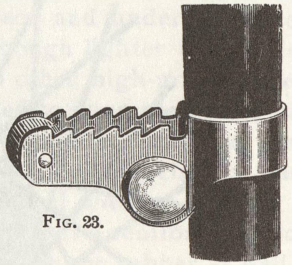

FIG. 23.

STEP.—The step used is very light and neatly made from cold rolled sheet steel, of the G. & J. pattern, and is adjustable to height and angle.

All parts of the Standard finished bicycles, except the head, saddle spring, handle bar, brake, cranks, pedals and step, which are polished and nickel-plated, are finished in jet black enamel of the finest quality, which is carefully applied and baked so that the luster is enduring and impervious to moisture or oil, and in a great degree to blows and bruises.

Every machine is provided with a nicely finished tool bag, containing a nickel-plated oil can, and set of steel drop-forged wrenches, guaranteed to fit every nut and screw-head.

Duplicate interchangeable parts can always be had from the factory.

Many prefer to have this wheel fitted with our semi-hollow rim described on page 31 and regularly used on the Champion, in which case the price will be $10.00 less. (See page 22.)

RATIONAL PATTERN.

For the use of riders desiring a machine of the Rational pattern, we can supply the American Champion or Light Champion with shorter backbones and fitted with 20-inch rear wheels, instead of the usual size, at an additional cost of $5.00.

CUSHION-TIRED LIGHT CHAMPIONS.

The American Light Champion, fitted with 1⅛-inch cushioned tires (see page 15), can be furnished, when desired, at an extra cost of $10.00. All Light Champions so fitted, however, are of the Rational Pattern, *i. e*, with 20-inch rear wheels, and crescent rims to both wheels.

PATENTS

UNDER WHICH WE MANUFACTURE.

Eminent counsel advise us that our patents cover all the fundamental features of the higher grade of Cycles.

Our Ball-bearing Patent, having on the axle a stationary and movable collar on which the balls run, antedates all other ball-bearing patents now in use. Our bearing-claims cover the only automatic aligning and self-adjusting front wheel bearing, features which are indispensable to easy-running and enduring Cycle mechanism.

Our patents on saddles cover every form of Hammock or Flexible Saddle, having an adjustably fastened rear spring, without which a comfortable Hammock or Flexible Seated Saddle cannot be produced.

We own the following list of patents which we respectfully submit for the inspection of those who are informed or interested in the subject:

NO.	DATE.	PATENTEE.	NO.	DATE.	PATENTEE.
197,421	Nov, 20, '77	John Smith.	366,218	July 12, '87	Thos. B. Jeffery.
259,313	June 13, '82	Thos. B. Jeffery.	366,775	July 19, '87	" "
275,917	Ap'l 17, '83	" "	370,396	Sept. 27, '87	" "
282,528	Aug. 7, '83	" "	371,326	Oct. 11, '87	" "
285,891	Oct. 2, '83	H. B. Hart.	379,276	Mar. 13, '88	" "
293,725	Feb. 19, '84	C. E. Duryea.	383,129	May 22, '88	" "
294,645	Mar. 4, '84	Freeman Lillibridge.	383,130	May 22, '88	" "
312,473	Feb. 17, '85	Thos. B. Jeffery.	383,131	May 22, '88	" "
314,701	Mar. 31, '85	W. D. McCoy.	384,980	June 26, '88	" "
329,102	Oct. 27, '85	J. M. Tryon.	385,715	July 10, '88	" "
333,128	Dec. 29, '85	Thos. B. Jeffery,	395,147	Dec. 25, '88	" "
335,590	Feb. 9, '86	" "	397,188	Feb. 5, '89	" "
337,171	Mar. 2, '86	Freeman Lillibridge.	397,189	Feb. 5, '89	" "
351,311	Oct. 19, '86	L. W. Conkling.	398,158	Feb. 19, '89	" "
352,190	Nov. 9, '86	Thos. B. Jeffery.	398,159	Feb. 19, '89	" "
352,191	Nov. 9, '86	" "	400,343	Mar. 26, '89	" "
354,907	Dec. 28, '86	" "	406,445	July 9, '89	" "
355,321	Jan. 4, '87	" "	408,014	July 30, '89	" "
358,932	Mar. 8, '87	" "	408,718	Aug. 13, '89	" "
359,608	Mar. 22, '87	" "	411,035	Sept. 17, '89	" "
359,609	Mar. 22, '87	" "	414,194	Nov. 5, '89	L. M. Cottle.
361,523	Ap'l 19, '87	Thos. B. Jeffery and L. M. Cottle.	434,449	Aug. 19, '90	Thos. B. Jeffery.
			441,417	Nov. 25, '90	" "
365,074	June 21, '87	Thos. B. Jeffery.	443,207	Dec. 23, '90	Albert Hering.

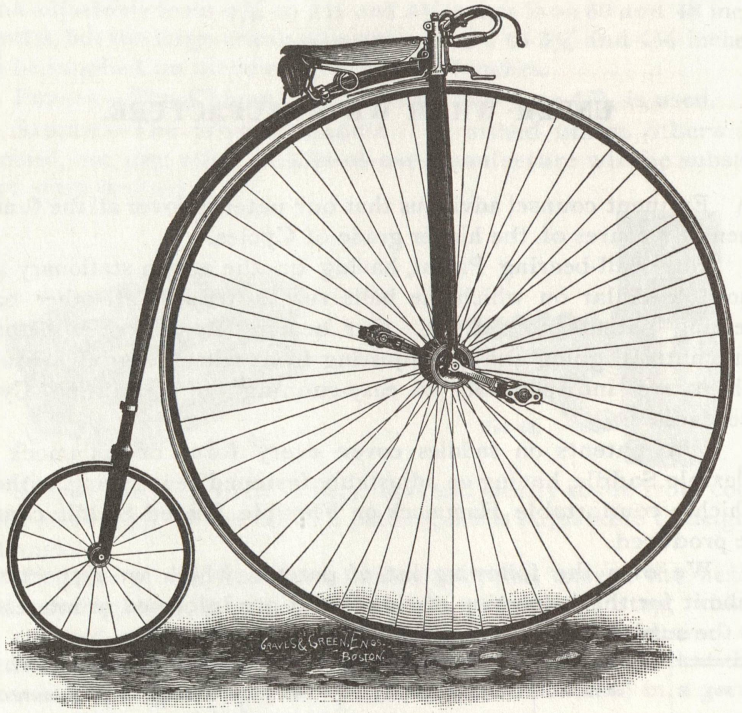

FIG. 24.

AMERICAN CHAMPION.

Diameter of Front Wheel.	Length of Leg, inside measure, to Sole of Foot.	Price, Standard Finish. Per Specification.	Price, all parts Nickeled except Wheels.	Price, full Nickeled, including Wheels.	Weight.
48	31½	$100 00	$105 00	$110 00	43
50	32½	102 50	107 50	112 50	44
52	33½	105 00	110 00	115 00	45
54	34½	107 50	112 50	117 50	46
56	35½	110 00	115 00	120 00	47
58	36½	112 50	117 50	122 50	48
60	37½	115 00	120 00	125 00	49

If nickeled spokes are desired with the Standard finish or half-nickeled bicycles, the cost will be, additional, $2.50.

If desired with Perfect-Fit handles (see page 46), extra, $2.50.

The American Champion will be furnished in the sizes below 48-inch at the same price as the 48-inch.

For Rational pattern, see page 28.

AMERICAN CHAMPION.

Again offered as a thoroughly tried, high-grade roadster in all that the term implies.

The material used in its construction consists only of drop-forged and pressed steel, excepting the gun-metal hub, which is described later, and every care has been maintained in the distribution of metal to properly endure the strains it is liable to be subjected to.

The head, neck, bearings, spokes, rims and pedals are made of forged and welded steel, the rear fork being of the modern shell or semi-hollow pattern, formed of steel in one piece. The backbone is 1½ inches diameter, of the choicest imported weldless steel tubing, properly tapered and brazed to the rear fork and neck.

The front forks are made of the same tubing, rolled to an elliptical section, tapered and brazed to the head and fork ends. This shape and quality of material insures extreme rigidity and strength. The front wheel has large, deeply-recessed gun-metal hubs, firmly fitted on a long tapered seat in the axle, preventing any possibility of the hubs slipping on the shaft.

The spokes are direct, and made of the best No. 12 *steel wire*, capable of being stretched before breaking, thickened at the hub and rim, and tested by a machine made for the purpose to a strain of 770 pounds each. The axle is of *forged steel*, carefully fitted to the bearings, and of material especially selected for its adaptation to this peculiar work.

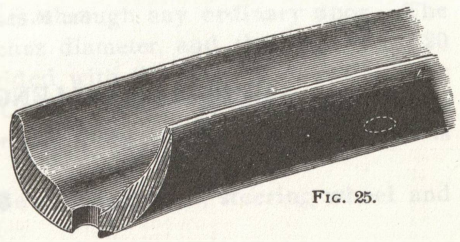

FIG. 25.

The rims are of the choicest quality semi-hollow steel, the strongest material and the most durable pattern we know of, the heaviest part of our rim (as shown by the engraving) not being weakened by spoke holes, as in the average rim. The tires are made of *moulded red Para rubber*, 1 inch in diameter on the front wheel and ⅞ inch on the rear, the latter being 17 inches for sizes 54-inch and above, 17 x ¾ for 52-inch, and 16 x ¾ for 50-inch and below.

The Champion is fitted with our Cobblestone saddle, but any other of our manufacture will be substituted when desired.

The handle bar, head, bearings, and all other parts not enumerated here, are similar to those of the American Light Champion.

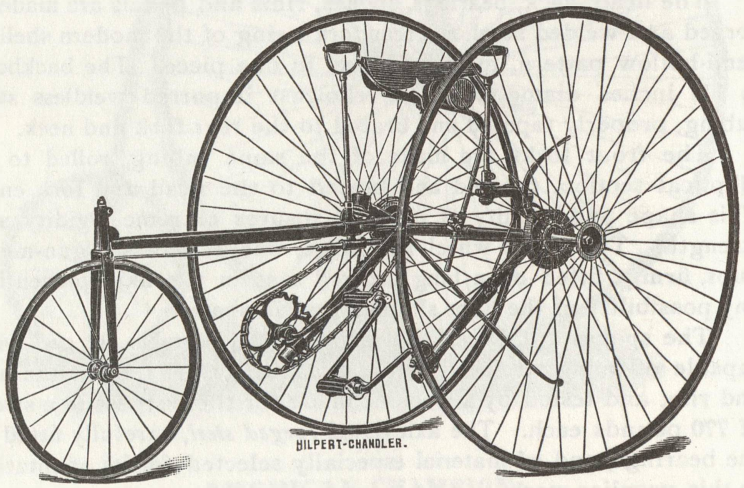

FIG. 26.

AMERICAN CHALLENGE TRICYCLE.

PRICE, . . . $115.00.

AMERICAN CHALLENGE TRICYCLE.

Perhaps there is no subject incident to the manufacture of cycles which has received more attention, or about which opinions are more varied, than that of a proper model for a tricycle. We considered the question very carefully, and long ago came to the conclusion that the two-track, open front model is the more practical type, for the reason that it can be used upon the ordinary country roadway, where two-track vehicles are used almost exclusively, forming two deep wheel ruts with a ridge between, and where a three-track machine would be impracticable. Another very cogent reason is that the two-track is steered more easily on narrow paths, crossings of streets or sidewalks, and is easier handled by ladies, as it has no front handle bar to prevent rapid dismounting, if necessary, or to prevent the seat being easily reached. These points are so apparent to lady purchasers that in nine cases out of ten, where a choice is given, the two-track is selected.

In matter of detail this machine follows so closely the lines of the Ideal Tricycle that a long and minute description is hardly necessary. It is made, however, for the use of adults and heavy riders, and is correspondingly larger and strengthened. The tubing is of the best, and the various parts, joints and connections are after the most modern and approved ideas, and in them nothing but the choicest of selected material is used. Its extreme width is 35 inches, and it easily passes through any ordinary door. The driving wheels are of 42 inches diameter, and the steerer of 20 inches. The machine is provided with the same differential gear used in the Ideal Tricycle. Choice of either 48 or 60 inch gear is given at the option of the purchaser, but unless stipulated the 60 is used.

It has ball bearings to the driving wheels, steering wheel and cranks.

The drop-forged chain is the same as is used on the Rambler.

The hammock saddle is made of the best quality of black leather.

The machine is of the usual standard finish of black enamel with nickel trimmings.

Each tricycle is provided with a nickel-plated oil can and a suitable wrench, contained in a neatly finished and improved tool-bag, and a lamp bracket, and weighs, all on, 75 pounds.

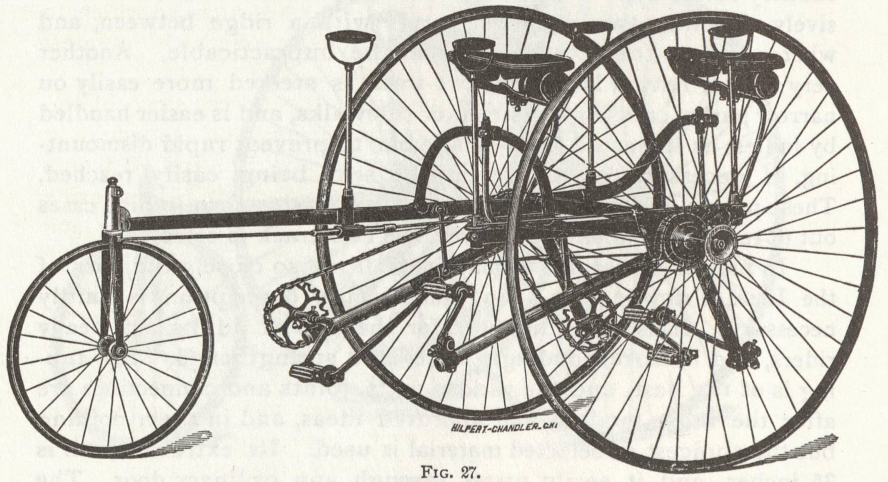

FIG. 27.

AMERICAN CHALLENGE TANDEM.

PRICE, . . $180.00.

If desired with Child's Seat, extra, ... $5.00.

AMERICAN CHALLENGE TANDEM.

Although primarily built for use on all sorts of country roads, this tandem has become a great favorite in cities containing splendid riding surfaces. For picnicing, the father can take his wife and child with him and still have plenty of room in which to stow away lunch, while for extended tours it offers the greatest carrying capacity of any cycle now made.

The entire frame is made from imported weldless steel tubing, well secured without unnecessary parts or braces, and is made light wherever possible; 38 inches is the extreme width, and 82 inches the length. The unusual length of the arm to which the steering wheel is attached gives increased steadiness to the steering and admits of the front seat being well removed from the rear one to give plenty of freedom to the rear rider. The forward seat is placed at the left of the center line and the rear one to the right, that a better outlook may be had by the rear rider. There being ample room, we can fit a child's seat between the others at an additional cost of $5. Either or both riders can do the steering and braking. Choice of either 48 or 60 inch gear is given at the option of the purchaser, but unless stipulated the 48 is used.

The driving wheels are 42 inches in diameter, with 1-inch tires; the steering wheel 20 inches, with ⅞-inch tire.

It has ball bearings to all of the wheels, and to the cranks.

Saddles are the same as on the Challenge Tricycle.

The drop-forged chain is the same as used on the Rambler.

The finish is in black enamel with nickel trimmings. Weight 114 pounds.

Each machine is provided with a nickel-plated oil can, and a suitable wrench, contained in a neatly finished and improved tool bag, and is also fitted with a lantern attachment.

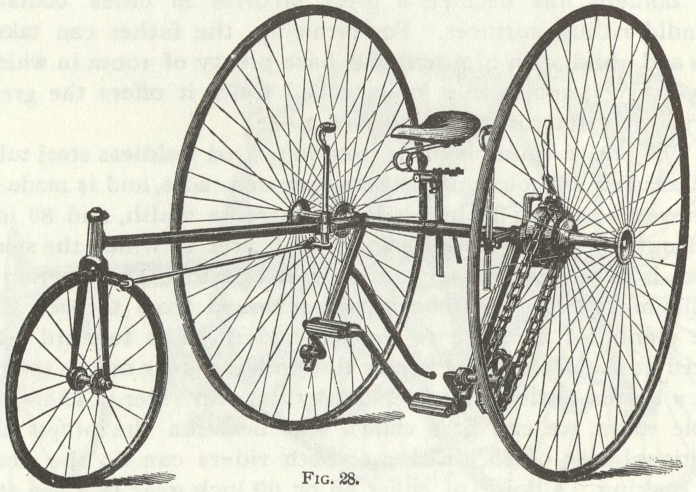

FIG. 28.

AMERICAN IDEAL TRICYCLE.

Diameter of Driving Wheels.	Diameter of Steering Wheel.	Price.	Weight.
30 inches.	14 inches.	$35 00	47 pounds.
34 "	16 "	40 00	51 "

AMERICAN IDEAL TRICYCLE.

This really beautiful little machine has received every care, and is listed now for its sixth season, with a well-earned reputation of being just what we claimed it when we introduced it to the cycling public. Its quality, both in material and manufacture, will compare very favorably with larger and costlier machines. Its durability is attested by its five years' use, during which time we have not seen a single machine worn out or rendered unserviceable by wear.

The frames are of tubing, tapered where necessary, and strongly and firmly brazed to the different fittings. The front fork, holding the steering wheel, is fitted with our well-known closed pattern head with long neck. Its movement is controlled by a rack and pinion; all steel shafts are used, carefully fitted. Steel double butt-ended spokes are used; the rims are of semi-hollow shaped steel; tires of the best Para rubber, ¾ inch to driving wheels, ⅝ to steering wheel. The cranks are fitted with attachments to take up the slack in the chain, which passes over a sprocket-wheel on the main shaft, and is fitted with a dress-guard to protect the dress from injury. The seat is of the ordinary saddle pattern, attached to the sliding rod, the latter fitted to the main frame so as to be adjustable in height. We find, after considerable experience, that this style of saddle is better adapted to riders of either sex than the ordinary or padded cushion seat. The extreme width, outside to outside of driving wheels, is 27 inches, which admits of its easy entrance to the average house door.

The steering is made perfect by the employment of an improved form of balance, or double driving gear, which transmits the power to each driving wheel; but admits of their revolving independently of each other when necessary, as in turning curves. The handles and seat are adjustable to height, and the latter, also, to position above the crank. A strong band-brake is provided in a convenient place near the hand of the rider.

The finish is of jet black color, relieved with gold leaf striping and nickel-plated trimmings.

Each machine is provided with a tool-bag containing a suitable oil can, wrench, and a bracket to attach a lantern to.

This machine is made exclusively for youths and young misses, and is not large enough or strong enough for adults.

LAMPS.

RAMBLER LAMP.

The Rambler Lamps differ from the usual safety lamp in details that have been devised after exhaustive experiment with most American and imported lamps. It has been our endeavor to construct a lamp the joints of which cannot be melted by undue heat from an improperly adjusted wick, that cannot be blown or shaken out by any wind or on any road upon which the cyclist can ride, and that will give the best light obtainable from good oil and a medium size of wick.

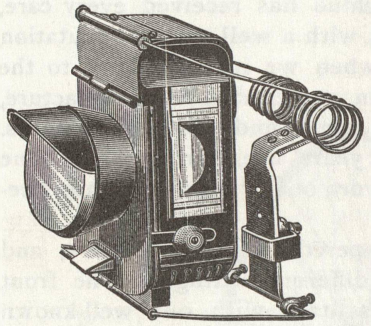

Fig. 29.

They are each formed of folded and locked seams, without solder, except in the oil reservoir. They have a finely polished beveled front and heavy ruby side lights, a well formed reflector detachable for cleaning, large oil reservoirs, very elastic, noiseless springs and spring connections, and a new method of securement to lamp brackets that is absolutely rigid and cannot be accidentally detached.

Lamp No. 1 requires a ⅞ and No. 2 a ¾ inch wick, the former being the largest lamp in use, the latter one a medium size, but capable of giving as much light as lamps of larger pattern.

Price, No. 1.....japanned, $4.50; nickeled, $5.50
Price, No. 2.....japanned, 3.50; nickeled, 4.50

CHICAGO HEADLIGHT.

A low-priced light, embodying the main features of the Rambler Lamp. It is of smaller size than the No. 2 Rambler, but contains a wick of the same width; it has a secure device for attachment to the bracket of the bicycle, and jointed arms turning in sockets, lined with insulating material, united to the securing device. A tempered elliptical spring, with simple fastening, forms the support and overcomes vibration of the wheel. The reflector is detachable, the oil reservoir of proper shape and so secured when the lamp is closed as to prevent rattle. The whole lamp is lock seamed, not soldered, but having the arms attached to the back, does not have quite as long or free a vertical movement as the Rambler lamp, arms of which reach the front. We confidently believe the Chicago Headlight to be the best lamp sold at such a low price. It is vastly superior to the imported patterns.

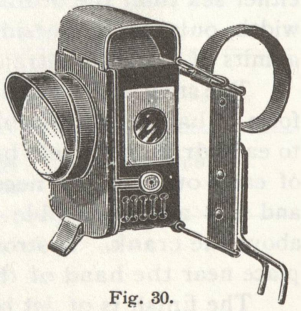

Fig. 30.

Price.....japanned, $2.00; nickeled, $2.75.

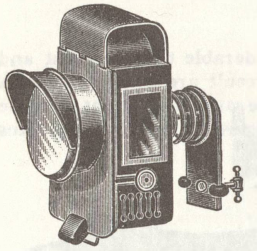

Fig. 31.

HEADLIGHT No. 2.

Slightly smaller and with a cheaper spring than the Chicago Headlight, but made in the same careful manner, and beyond doubt the best safety lamp ever offered for the money.

Price, japanned.....$1.50

CHAMPION LAMP.

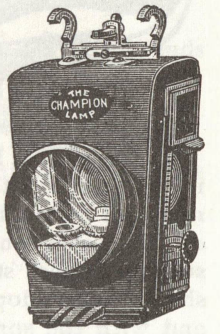

Fig. 32.

Fits any size over 50-inch.

Price, japanned.....$3.50
Price, nickeled..... 4.50

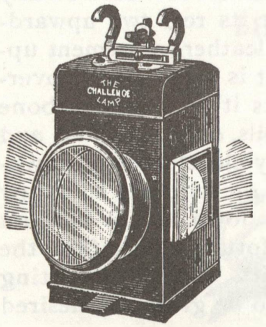

Fig. 33.

CHALLENGE LAMP.

Fits any size above 30-inch.

Price, japanned.....$2.50
Price, nickeled..... 3.00

IDEAL LAMP.

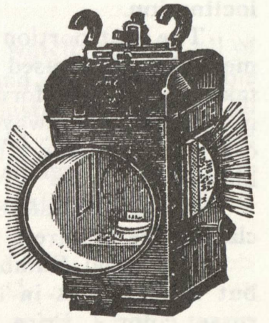

Fig. 34.

Fits all sizes from 30-inch upwards.

Price, japanned.....$2.00
Price, nickeled..... 2.50

SADDLES.

For the past five years we have devoted considerable time, thought and capital to the perfection of cycle saddles, and as a result are able to present a line of those very necessary articles which affords the purchaser great latitude in selection, and which we believe embodies every principle which contributes to comfort and durability.

RAMBLER SADDLE.

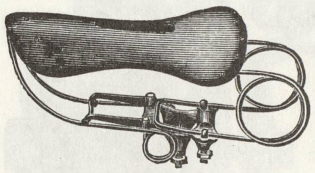

FIG. 35.

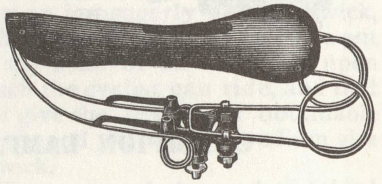

FIG. 36.

This saddle has a black seat portion of leather specially curried for this use, containing exactly enough material to insure its softness and durability with no excess of lubricant. The best portion of the hides only is used for saddles, and this is thoroughly stretched and strained to prevent alteration in later use. The shape is one adopted after thorough tests of all saddles obtainable, and with the spring now used forms the easiest seat used on any bicycle. The light forward spring has at its rear two upward-pressing coils that sustain the front of the leather; movement upward and rearward under the rider's weight is prevented by overhanging arms on the clamp which connects it with the backbone and rear spring. The latter has also two coils, of heavier steel and larger diameter, arranged to sustain and yield elastically downward, and is capable of endwise movement on its clamp to adjust the leather's tension. The position, up or down, of the saddle's end contributing much to the rider's comfort or discomfort, the clamps used this season are provided with curved supporting blocks of a form which permits the saddle to be given any desired inclination.

The seat portion is made 13, 11 or 9 inches in length, the former (Fig. 36) is used much in hill-climbing, enabling the rider to take a position forward or rear on the saddle, as desired; the medium one is always furnished unless either of the others is indicated in the order; the short saddle (Fig. 35) is used on ladies' bicycles.

In ordering, state if for solid or hollow seat post, as different clamps are required. Price of either of the above, $6.00.

The Ideal Rambler saddle is similar in shape to the others, but is 10 inches in length, with a lighter spring and leather of russet color. Price, $4.50.

WONDER SADDLE.

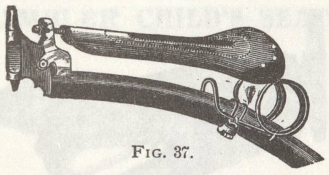

FIG. 37.

One of our late acquisitions, and one which gains friends whenever tried. It is adjustable front and rear, and, being very narrow in front, enables the rider to get directly over his work. Only the best of material is used, and we do not hesitate guaranteeing it to be one of the most durable and comfortable saddles made. We also adapt this saddle to tricycles.

Price, for bicycle or tricycle.....$6.00

LILLIBRIDGE SADDLE.

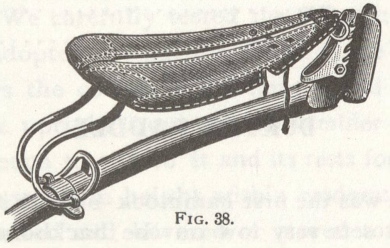

FIG. 38.

We believe this saddle is one of the few which embody all of the principles necessary to a comfortable and perfectly flexible hammock seat. In matter of universal adjustment it leads all others, being adjustable in height in front and rear, in width and in length. It has a bifurcated seat, the advantages of which are generally understood, and a comfortable coasting-plate. It is adapted to all makes of ordinary bicycles.

Price.....$5.00

COBBLE-STONE SADDLE.

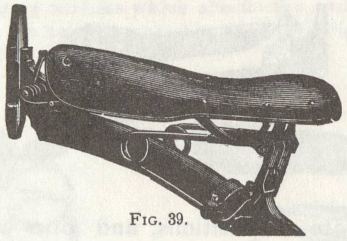

FIG. 39.

This is made of specially prepared and selected leather. It is narrow in front, has a comfortable coasting-plate in the rear, and is adjustable. The spring at the rear is flexible, and the strap which connects the two parts of it (see cut) limit the upward throw, and to a great extent avoids the danger of headers. Its name was suggested from the fact that in experimenting, on poorly and roughly paved streets it was found that it could be used over car tracks and cobble-stones easier than any saddle ever tried. Made in three sizes.

	PRICE.
Large	$6.00
Medium	4.50
Small	3.00

DURYEA SADDLE.

The Duryea was the first hammock bicycle saddle patented in this country. It sets very low on the backbone, and is a prime favorite with scorchers and racing men, many of the old-time flyers insisting that it is the only perfect seat for fast work. To accommodate those who share in this belief, we have them always in stock.

Price.....$4.00

Our saddles are all furnished with clamps to fit 1½-inch round backbones, which is the size used on the standard American roadsters, but when desired we can supply clamps to fit 1⅜ or 1¼ inch round or oval backbones.

RAMBLER CHILD'S SEAT.

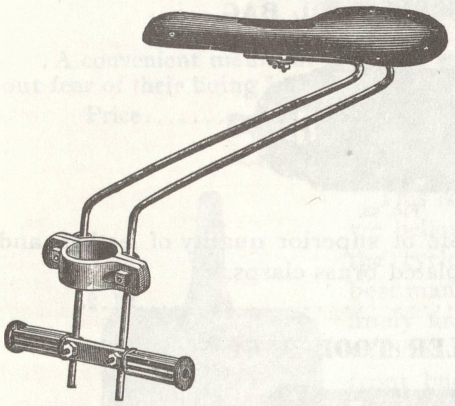

FIG. 40.

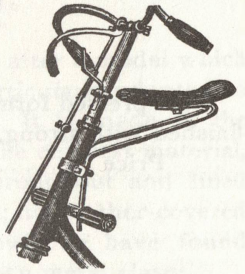

FIG. 41.

This attachment is an article we have made for the last few years, and which in all cases has given considerable satisfaction to the purchasers. We carefully tested the different forms of child's seat, and finally adopted the pattern shown in the cuts.

Fig. 40 shows the complete attachment, and Fig. 41 exhibits it attached to the upright front of the Rambler frame, requiring nothing but a wrench to secure it and its rests for the child's feet. The rests are adjustable in height within moderate distances, and the seat may be raised and lowered or moved toward or from the handle bars, which the child will hold, facing, of course, forward.

The possession of one of these seats by a rider who has a little one of from two to five years of age, adds a new and unexpected enjoyment to wheeling, and results in a largely increased season's mileage.

Price, complete.....$6.00

TOOL BAGS.

The hard usage to which the necessary cycling accessories are subjected, emphatically demands the use of nothing but choice and tough material. While our goods in this respect are perfect, we have also paid especial attention to the workmanship and finish.

TELESCOPIC TOOL BAG.

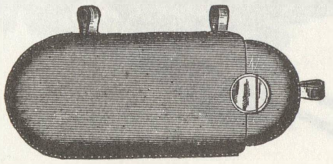

FIG. 42.

Of pressed form; is made of superior quality of leather, and finished with strong, nickel-plated brass clasps.

Price.....$1.25

RAMBLER TOOL BAG.

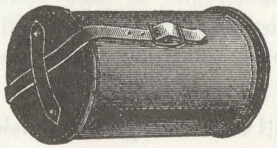

FIG. 43.

Particularly adapted to saddles, such as the Rambler and Wonder, having a round rear spring. This article is hand-made and carefully finished in either russet or black. Only selected leather is used.

Price.....$1.00

USEFUL TOOL BAG.

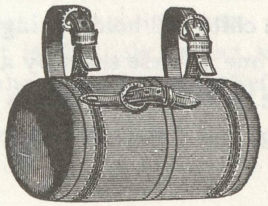

FIG. 44.

Operates similarly to the Telescopic and Rambler, but is made more especially for use on small machines.

Price.....60 cents.

G. & J. BELT POUCH.

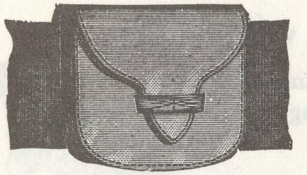

FIG. 45.

A convenient means of carrying watch, wrench, or money without fear of their being lost or damaged.

Price.....50 cents.

CHAMPION TOOL BAG.

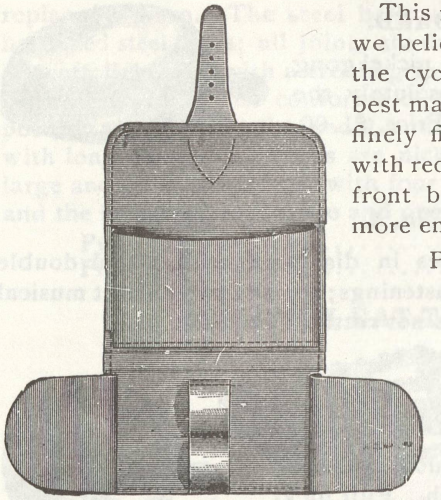

FIG. 46.—OPEN.

This is formed after a model which we believe is particularly adapted to the cycler's use. It is made in the best manner, of the choicest material, finely finished throughout and lined with red morocco; has leather-covered front buckle, which we have found more enduring than metal clasps.

Price.....$1.00

FIG. 47.—CLOSED.

IDEAL TOOL BAG.

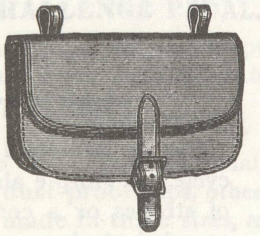

FIG. 48.

Is of the ordinary pouch shape and wears well. Well adapted for use on youths' machines.

Price.....50 cents.

BELLS.

No. 1. THE YOUTHS' BELL.

2¼ inches in diameter, with nickel gong and bronze fastenings. Price, 50 cents.

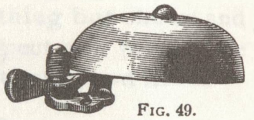

Fig. 49.

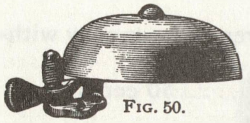

Fig. 50.

No. 2. THE FAVORITE.

2½ inches in diameter, with full nickel gong and fastenings. Price, 75 cents.

No. 3. THE STANDARD.

3½ inches in diameter, with nickel gong and fastenings. This is absolutely the loudest bicycle bell in use. Price, $1.00.

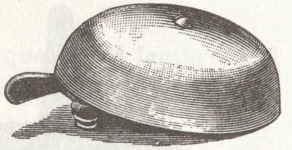

Fig. 51.

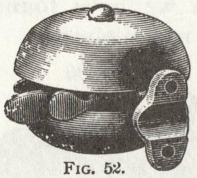

Fig. 52.

No. 4. THE CHIMING.

2½ inches in diameter, with nickel double bells and fastenings; sounds two distinct musical notes; does not rattle. Price, $1.50.

No. 5. THE SUPERB.

The Superb has a continuous chiming sound, and is of superior finish. Full nickeled. Price, $2.00.

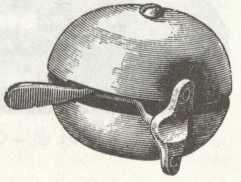

Fig. 53.

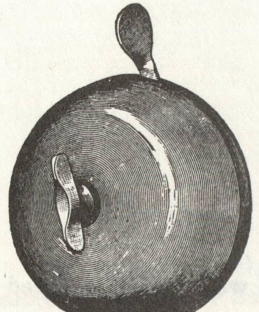

Fig. 53½.

PERFECTION ALARM.

Can be attached to any bicycle or tricycle. A simple alarm stroke, a succession of strokes or a continuous alarm can be sounded at pleasure. Price, $2.50.

CHAMPION BALL PEDAL.

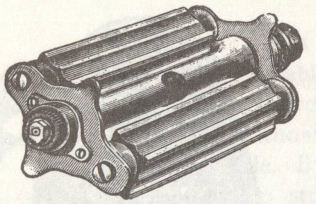

Fig. 54.

The shaft is of steel, accurately fitted, and the end plates are stamped out of rolled sheet steel. The pin is square, and instead of being riveted at both ends, as is usually the case, it is fitted with a screw at one end, so that the plate can be removed and the rubber replaced if worn. The steel balls at either end are contained in hardened steel cases; all joints are dust-proof. The pedal rubbers are soft, light, and with a treble grip surface of our patent quadrilateral pattern, which conforms to the shape of the foot in any position assumed by the pedal, and the foot does not slip or tire with long riding. All parts are nickel-plated; made in two sizes, large and small, the former with four inches between the end plates and the latter with but three and one-half inches.

Price, per pair, large.....$9.00
Price, per pair, small..... 8.50

CHAMPION RAT-TRAP PEDAL.

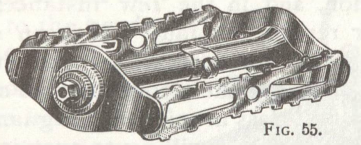

Fig. 55.

Same as the above, excepting that chisel-teeth, instead of rubbers, are used. Price, per pair, $9.00.

CHALLENGE PEDAL.

Similar to the Champion pedal, except that it has parallel instead of ball bearings. Price, per pair, $4.50.

IDEAL PEDAL.

Similar in finish to the Challenge pedal, but are smaller and lighter, and have steel dust-proof caps, otherwise the construction is identical. They are made in three sizes, as specified below:

	Per Pair.
Price, 3½ inches wide, for 48 and 50 inch.....	$3.50
Price, 3¼ inches wide, for 42, 44 and 46 inch....	3.00
Price, 3 inches wide, for 30, 34 and 38 inch....	2.50

STANDARD CYCLOMETER.

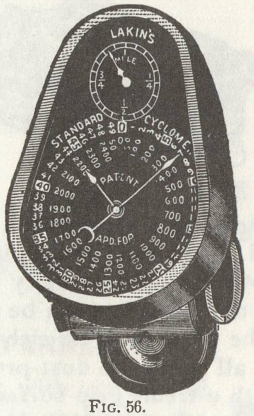

FIG. 56.

The action is positive, continuous and reliable in every respect Can be read from the saddle and can be used with or without hub lantern.

We have thoroughly tested this cyclometer for the past five years, and have obtained only the best results. We find it to be exactly as represented by its manufacturers, whose elaborate description a lack of space prevents our publishing. It has been used on every kind of American road, and given our customers the best satisfaction, and in the few instances that it has been returned to us for repairs, the fault has been either due to hard usage on the part of the transportation companies, or carelessness on the part of the user, so that altogether we can conscientiously recommend it as a first-class article, with a guarantee by its manufacturers that we are perfectly willing to sustain.

PRICE.

For ordinary bicycle, and front wheel of Rambler.....$10.00
For driving wheel of Rambler..... 11.00

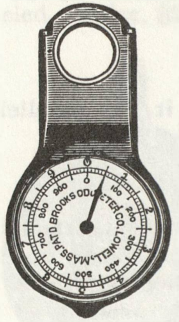

FIG. 57.

BROOKS' IDEAL CYCLOMETER.

A neat little instrument which registers correctly and is sold at a moderate cost. Every cyclometer is fully warranted by the manufacturers.

Price.....$5.00

When ordering for a safety bicycle, state if for front or rear wheel.

LAMSON'S LUGGAGE CARRIER No. 1.

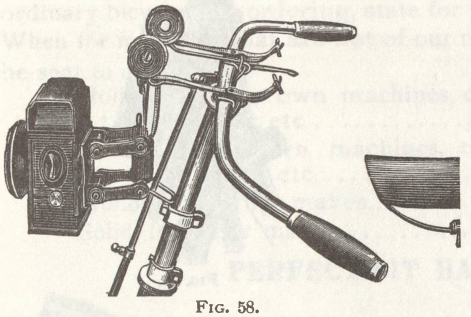

FIG. 58.

This Carrier is made detachable; so that it may be removed from the bicycle without undoing the bundle. By simply unbuckling the strap which holds it down in front, and unhooking it behind the bar, and then fastening the hook again, it becomes a perfect shawl strap.

Students using the wheel will find this arrangement invaluable in carrying their books. Made in two widths, 3½ and 4¾ inches between the arms. In ordering, state if for ordinary or safety.

Price.....$1.00

LAMSON'S LUGGAGE CARRIER No. 2.

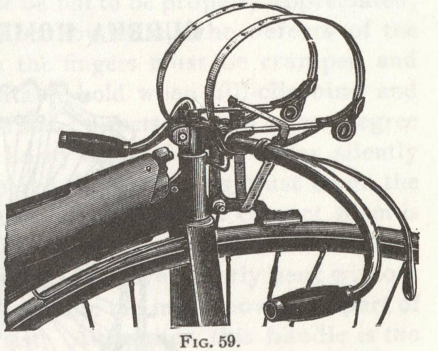

FIG. 59.

It is a simple and effective device for attaching a coat or any other bundle to the head and handle bar of a bicycle, sustaining it in a position over and in front of the head, and out of the way in mounting.

It weighs but a trifle, and can be easily carried in the pocket when not in use. It can be attached to the bicycle in a moment, and removed as quickly, and when detached serves as a SHAWL STRAP for carrying the bundle. By reading directions supplied it can be put on without trouble.

When in use on the bicycle it places the additional weight where it can best be carried without extra exertion by the rider. The Carrier does not interfere with use of brake, nor offer any discomfort in coasting. In ordering, state if for ordinary or safety.

Price.....75 cents.

RAMBLER LUGGAGE CARRIER.

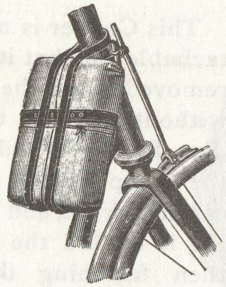

FIG. 60.

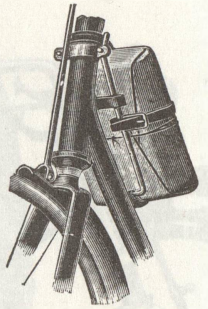

FIG. 61.

This Carrier is suitable for most safeties and will fit the backbone of the ordinary bicycle. It consists of a strong steel wire frame, furnished with clamps with which to secure it where wanted, and provided with strong leather straps and buckles for retaining a package, which can be very conveniently carried in full sight of the rider when on the Rambler and on most rear-driven safeties.

Price.....$1.00

EUREKA HOME TRAINER.

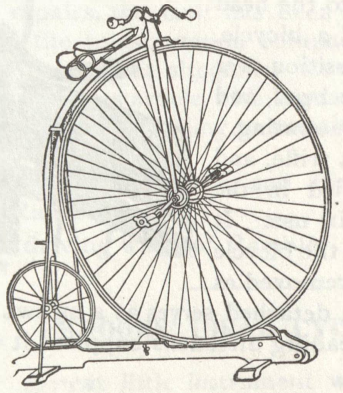

FIG. 62.

A simple, durable, serviceable and reasonable-priced article, which abundantly serves its purpose.

Price.....$7.50

G. & J. RAM'S-HORN HANDLE BAR.

(See page 25.)

Unquestionably the most practical handle bar ever fitted to an ordinary bicycle. In ordering, state for what machine it is desired. When for machines that are not of our manufacture, the fork must be sent to us.

	PRICE.
Hollow, for our own machines, complete with brake lever, etc.	$7.90
Solid, for our own machines, complete with brake lever, etc.	6.20
Hollow, for other makes	10.00
Solid, for other makes	8.00

PERFECT-FIT HANDLE.

FIG. 63.

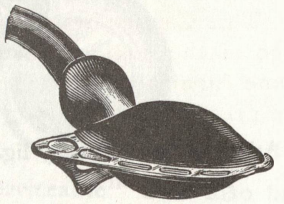

FIG. 64.

This design in handles is used only by us, and on the ram's-horn handle bar. Its advantages must be felt to be properly appreciated; an understanding may be obtained by noting the defects of the ordinary shape, and how much the fingers must be cramped and pressure exerted to obtain a suitable hold when hill-climbing and encountering sandy roads. The same defects exist in a less degree on all occasions, to which the horny hand of every rider silently testifies, and when it is remembered that the hands must be on the handles almost the whole time, the necessity for a correct form is appreciated. The result of such requirement is the production of a handle fitted to the hand when the fingers are slightly bent without exertion; it forms a grip for the thumb, the most powerful part of the hand, and a rest for the wrist. Altogether, this handle is the perfection of comfort.

Price, per pair, when ordered with machine.....$2.50
Price, per pair, separately..... 4.00

EBONITE HANDLES.

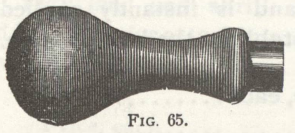

FIG. 65.

Ebonite handles, with large ball-shape ends, per pair, $1.50. Solid soft rubber handles, same pattern, large size, per pair, $2.00; medium, $1.00; small, 75c.

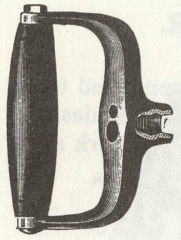

FIG. 66.

SPADE HANDLES.

Made in two sizes, the smaller size for juveniles' machines. Both have hard rubber grips of approved shape.

Price, large, per pair.....$2.50
Price, small, per pair..... 2.25

CHAMPION STEP.

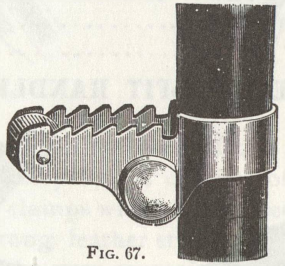

FIG. 67.

Adjustable and very light and neat in design and appearance.

Price, each.....$1.50

IDEAL STEP.

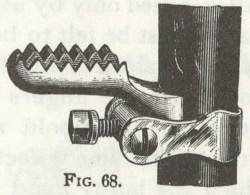

FIG. 68.

Consists of an adjustable saw-tooth step, with a rubber inset, which prevents the foot from slipping.

Price, each $1.00

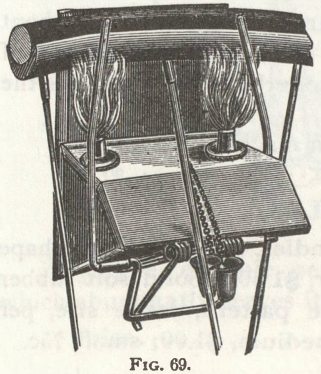

FIG. 69.

IDEAL TIRE HEATER.

An improvement on existing heaters. It directs the flame on the rim, shields the rubber, heats quickly, and is instantly applied and adjustable to the best position.

Price, each.....$1.00

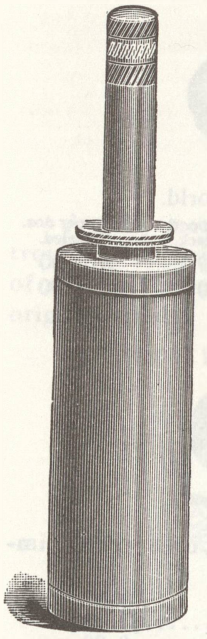

FIG. 70.

EUREKA OILER.

One of the handiest on the market. Is light, neat, non-leakable and can be carried in the vest pocket. The stopper cannot be lost and the oiler has a needle to keep the channel free.

Price.....25 cents

IDEAL OILER.

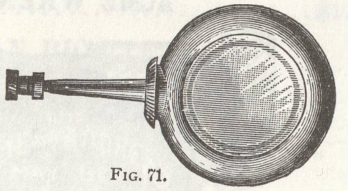

FIG. 71.

Neat, light and serviceable. Can also be carried in the vest pocket.

Price.....15 cents.

CALLIOPE OR DUPLEX WHISTLE.

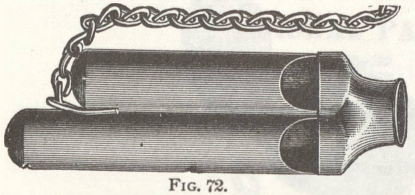

FIG. 72.

The Duplex Whistle, which was originally made for a police call, has been generally adopted by cyclists. It is made of brass and is nickel-plated. It consists of two barrels of different lengths, which produce a discordant sound that can be heard a long distance.

Price, with chain.....25 cents.

THE CALL WHISTLE.

Very loud and shrill, and has a ring for attaching to watch chain.

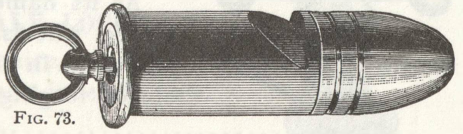

FIG. 73.

Price, each.....25 cents.

B. & S. POCKET WRENCH.

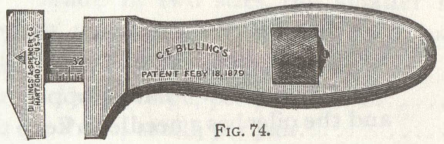

FIG. 74.

The best wrench of its kind in the world.

	Opens.	Weight.	Price per doz. Black.	Price per doz. Nickeled.
4-inch Wrench	1 inch.	6½ oz.	$ 9.00	$10.00
5-inch Wrench	1¼ inch.	9½ oz.	10.00	12.00

ACME WRENCH.

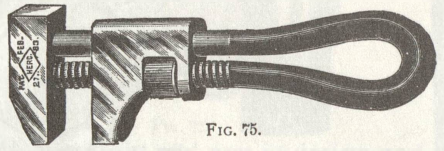

FIG. 75.

A light, strong article of pocket size. Has been greatly improved. Every wrench guaranteed.

	Per doz.
Price, bright standard	$8.00
Price, nickeled	9.60

G. & J. TANGENT SPOKE GRIP.

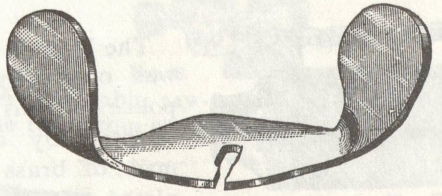

FIG. 76.

For American Light Champion and other tangent spoked wheels.

Price, each.....35 cents.

G. & J. DIRECT SPOKE GRIP.

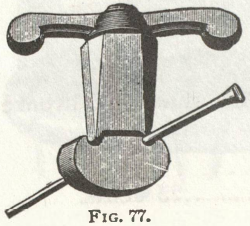

FIG. 77.

As its name implies, for use on direct spoked wheels. Formerly imported but now made in our own factory and entirely of steel forgings.

Price, each.....60 cents.

G. & J. CRANK EXTENSION.

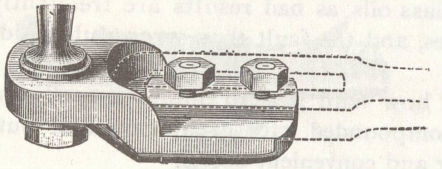

FIG. 78.

A ready means of securing an extra long crank without the trouble of removing the old one or securing a new one. Consists of a single piece with two screws for attachment to the slot in original crank.

Price, per pair $1.00

AMERICAN BICYCLE LOCK.

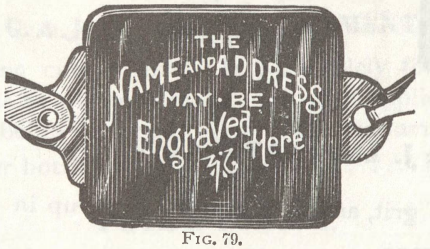

FIG. 79.

Neat, low-priced, simple and practical.

Price.....75 cents.

IDEAL PADLOCK.

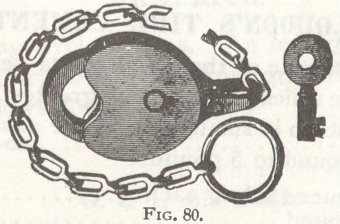

FIG. 80.

A small, light, well-made, serviceable article.

Price, gilt, with 12-inch chain, per doz.	$7.20
Price, nickel, with 12-inch chain, per doz.	9.00

YALE LOCKS.

Too well known to require mention. Are made of bronze throughout, and are practically indestructible.

Price, bronze, per doz.	$15.00
Price, nickel-plated, per doz	18.00

We would impress upon riders the importance of using nothing but first-class oils, as bad results are frequently attained from inferior articles, and the fault then wrongfully laid to machine or lamp.

Realizing how hard it is to obtain a really first-class article, our oils are compounded with great care and put up in spouted cans for ready and convenient use.

FIG. 81.

G. & J. ILLUMINATING OIL.

Pure and perfectly safe, being at the same time highly inflammable, yet absolutely non-explosive.

Put up in spouted quart cans.

Price, per can.....60 cents.

G. & J. LUBRICATING OIL.

Free from grit, and very lasting. Put up in spouted pint cans.

Price, per can.....50 cents.

FIG. 82.

LOUDON'S TIRE CEMENT.

This cement is made of the finest gutta-percha, and manufactured with that care which produces the greatest amount of adhesive strength. It is put up in small, two-ounce cakes, and larger ones, weighing from 1 pound to 5 pounds.

Price, two-ounce cakes, each.....$0.20
Price, per pound..... 1.00

LOUDON'S LION CEMENT.

For repairing cuts in rubber tires and other rubber goods.

Price, per box, each.....25 cents.

LOUDON'S COMPOSITION.

For filling holes in tires.

Price, per cake.....25 cents.

CYCLE BRUSH TOOL.

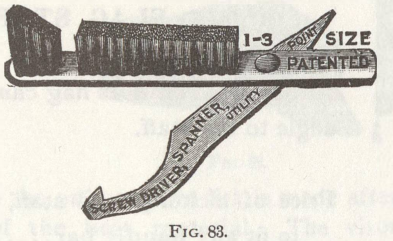

FIG. 83.

A useful little article, combining a brush for cleaning bearings and other inaccessible parts, a screw driver, a spanner for adjusting bearings, and an "utility point" for picking out imbedded dirt.

Price.....50 cents.

G. & J. LIQUID TIRE CEMENT.

For mending cuts in tires. Is made solely for us, and being in liquid form is at all times ready for instant application, no heating or melting being required. A very superior article.

Price, per bottle.....25 cents.

PUTZ'S POMADE.

The best article in use for polishing nickel-plate.

Price, per box.....10 cents.

GRAPHITE.

For lubricating cycle chains. An imported article, specially prepared for the purpose; is free from grit and greasy substances and put up in bellows form.

Price, per box.....25 cents.

G. & J. ENAMEL.

FIG. 84.

A jet black, quickly-drying enamel, made expressly for retouching machines. Put up in four-ounce bottles, which contain sufficient liquid to re-enamel an entire machine, if desired. Each bottle is supplied with a brush.

Price, per bottle.....50 cents.
Price, mail, including postage and packing.....70 cents.

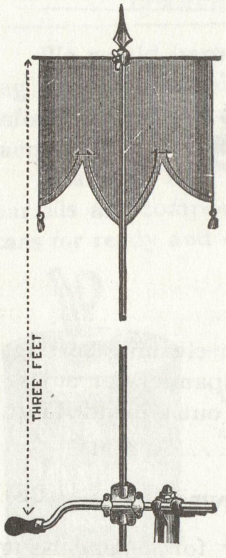

Fig. 85.

FLAG STAFF.

So arranged that flag can be placed at any angle to the staff.

Price of nickel-plated staff, with clamps to fit any handle bar.....$4.00

Price of silk flag, with appropriate lettering on both sides, and any color of silk, with gold or silk fringe.....$6.00

BUFFALO BICYCLE STAND.

Will hold any safety, including the tandem, by either wheel, and may be adapted to the ordinary bicycle by the substitution of a longer front stay.

Price $1.00

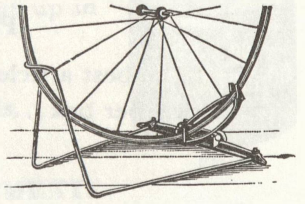

Fig. 86.

TROUSER GUARD.

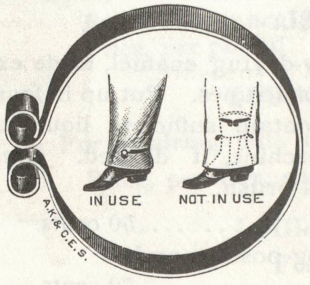

Fig. 87.

A neat, simple and convenient device for protecting the trousers from grease and dirt, and from being caught in spokes or chain.

Per Pair.

Price, blued.....15 cents.
Price, enameled ....25 cents.
Price, nickeled .....30 cents.

CLUB CAP.

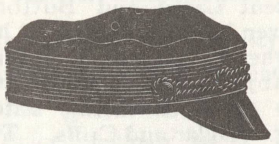

Fig. 88.

This Cap, the only one we list, is made after the most approved design and of the best material. The visor projecting down, shields the eyes from the sun. It is of very light weight. Color, dark navy blue. When ordering, give size.

Price, each.....$1.75

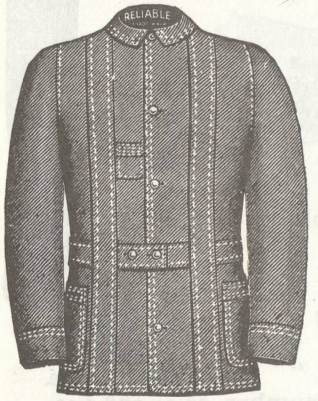

Fig. 89.

FLANNEL NORFOLK BLOUSE.

Made especially for us and after our own design.

Combining in one garment a bicycle shirt, house coat, walking coat, tourist jacket, lawn tennis blouse, etc., a very desirable garment for cyclists. Color, navy blue. When ordering give breast measure.

Price.....$7.50

BICYCLE LEGGINGS.

Canvas-lined; button fastening; dark brown; do not show dirt; 17 inches high, side measure. Made with black button fastenings.

Per Pair.

Price, Men's sizes, 6 to 10 .....$1.50
Price, Boys' sizes, 1 to 6 ..... 1.50

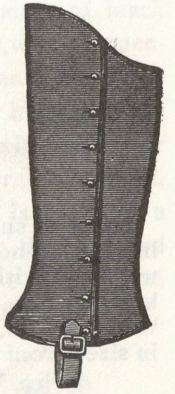

Fig. 90.

FLANNEL SHIRTS.

FIG. 91.

Patent Laced and Buttoned combined. Lace loops over buttons; does not have to be laced or unlaced when putting on or taking off. Buttons and Laces ADJUSTABLE, TO BE TAKEN OUT BEFORE LAUNDRYING. 1¼-inch facing stitched on each side of opening. Collar and Cuffs. Two Pockets—handkerchief on left, watch or change on right side. Sleeves faced. Yoke. Shirt Double Stitched—stitching to match flannel. Buttons of flannel to match.

SIZES, 14, 14½, 15, 15½, 16.

Price, each, gray.....$2.00
Price, each, blue..... 2.50
Price, each, white..... 2.50

BICYCLE HOSE.

We have made arrangements with a prominent woolen manufacturer to supply a line of hose made expressly for bicyclists. We furnish goods and colors as follows:

SIZES, 9½, 10, 10½.

No.		Per. Doz.
1.	Wool, plain gray, navy blue and black,	$ 6.00
2.	" " " "	9.00
3.	" narrow ribbed, " "	12.00
4.	" wide " " "	12.00
5.	Worsted, plain, " "	18.00
6.	" wide ribbed, " "	18.00
7.	" narrow " " " "	18.00

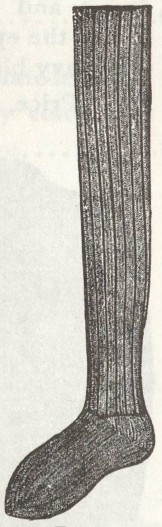

FIG. 92.

When ordering state distinctly list number, color and size.

CYCLISTS' BELTS.

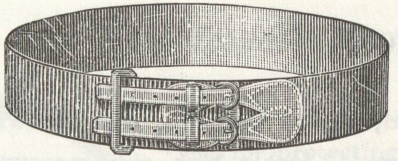

FIG. 93.

A most suitable belt for cyclists' use, the straps and loops yielding to the movement of the body. Made of fine worsted or cotton webbing, with double leather straps and loops. Solid colors—red, black, white, brown, navy blue and light blue. Blue center, two white stripes; red center, two white stripes and blue center. Made in sizes from 27 to 32 inches.

Price, Worsted webbing belts.....per doz. $3.60
Price, Cotton webbing belts.....per doz. 3.00

KNEE BREECHES.

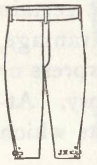

FIG. 94.

Made from extra heavy quality worsted Jersey cloth. The cloth is elastic; gives with every motion of the leg. In navy blue or black. When ordering, give waist measure. Price, per pair, $4.00.

The Jersey cloth in these breeches is heavier and of a finer quality than ordinarily used. It is double fold, 54 inches extreme width, and to those who wish to have their own tailor do the work, we will sell the cloth at $3.50 per yard.

THE CHICAGO SHOE.

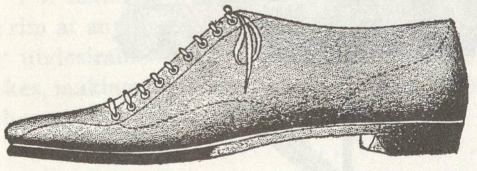

FIG. 95.

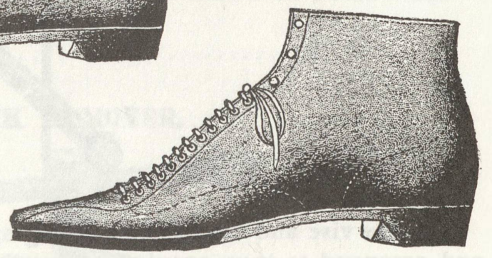

FIG. 96.

This shoe is of an entirely new design, and presents a much neater appearance than any yet produced. The upper is of black Dongola stock, and laces well below the ball of the foot, with an opening at bottom of lacing which affords ventilation and gives the advantage of lacing the shoe tightly over the instep or loosely at the ball, as desired; the heel is low and broad, and has the inside corner beveled to prevent its being struck and damaged by crank or pedal, a common fault with the average shoe. This shoe is made by a special process which makes the shank extremely flexible and allows the foot to rest in a natural and comfortable position on the pedal. Made in sizes and half sizes, from 5 to 10. Widths, C, D and E. The narrowest is C.

Price, high shoe, per pair.....$5.00
Price, low shoe, per pair..... 4.00

REPAIRERS' TOOLS.

In our capacity as manufacturers, we have found that certain tools could be used by wheelmen and agents, to great advantage, to make many minor repairs, and thus save expense of express or freight charges and loss of time in sending wheel to factory. Attention is directed to the following tools and implements which cannot properly be dispensed with.

SPOKE HEADER.

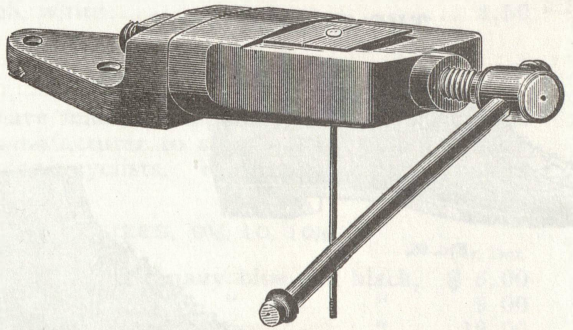

FIG. 97.

Spoke vise and die used in heading spokes, useful for all kinds, and arranged to turn angularly, to accommodate wheels in which the spokes are headed after they are inserted in the wheel. Each vise is provided with dies that will hold four sizes of spokes.

Price $12.00

HANDY STRAIGHTENER.

FIG. 98.

A tool devised and found useful for straightening forks, cranks and handle bars. It is of great value to repairers and touring parties, and should be owned by every club in the United States. It is made of steel throughout, and polished.

Price..... $2.00

RIM CLAMP.

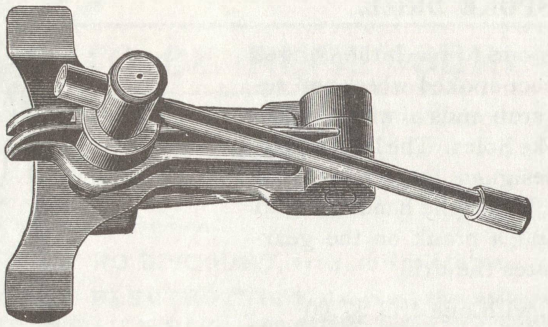

FIG. 99.

For taking kinks or short bends out of rims. It will pinch the rim at any part, and by being closed with the screw will correct any undesirable bends, thus taking undue strain off particular spokes, making the wheel stronger and truer than it could be made without it.

Price..... $8.00

CRANK REMOVER.

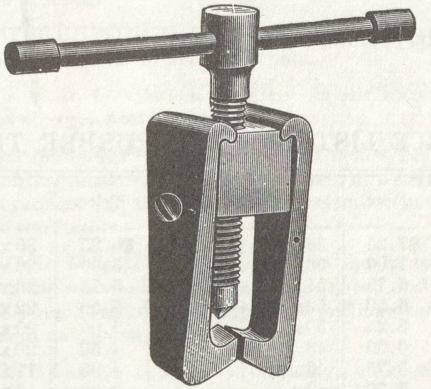

FIG. 100.

Long used in our repair department to remove cranks from imported and other bicycles which have a key driven endways into a groove, or key-way, between the crank and the axle. The hooked claws grip the under side of the crank while the screw is forced against the end of the axle. This is indispensable in all properly equipped repair shops.

Price..... $6.00

SPOKE DRILL.

Enables one to reach the flanges of any direct-spoked wheel and remove any stub ends of wire remaining in spoke holes. The long, upper stem is designed to go under the left arm. While the handle is held in the hand a crank on the gear-wheel rotates the drill.

Price, with one drill, $7.00

Twist Drills for the above, size No. 35, are specially made with a left-hand cutting edge, and the drilling device must be rotated in a direction opposite to the usual direction for drills to run, by which means the threaded stub will unscrew itself after being partially drilled.

Price, each.....30 cents.

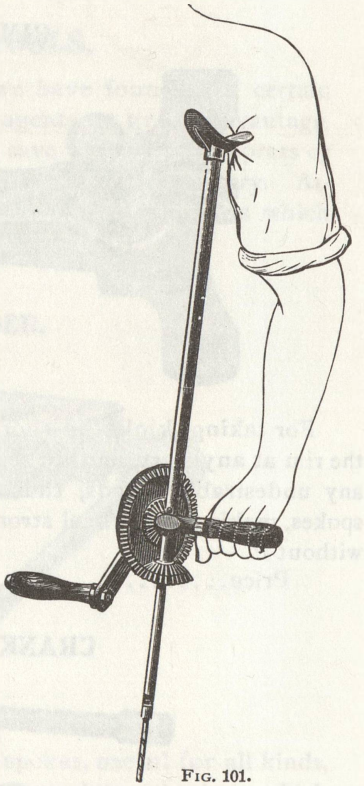

FIG. 101.

PRICE LIST OF SOLID RUBBER TIRES.

Size.	Price.	Size.	Price.	Size.	Price.
60 x 1.....	$7.25	58 x ⅞.....	$6.25	30 x ¾.....	$2.75
58 x 1.....	7.00	56 x ⅞.....	6.00	26 x ⅞.....	3.00
56 x 1.....	6.75	54 x ⅞.....	5.75	26 x ¾.....	2.50
54 x 1.....	6.50	52 x ⅞.....	5.50	22 x ¾.....	1.75
52 x 1.....	6.25	50 x ⅞.....	5.00	20 x ⅞.....	1.75
50 x 1.....	6.00	48 x ⅞.....	4.50	20 x ¾.....	1.60
48 x 1.....	5.75	46 x ⅞.....	4.25	17 x ⅞.....	1.60
46 x 1.....	5.50	42 x ⅞.....	4.00	18 x ¾.....	1.25
44 x 1.....	5.25	30 x ⅞.....	3.50	17 x ¾.....	1.15
42 x 1.....	5.00	46 x ¾.....	3.15	16 x ¾.....	1.10
40 x 1.....	4.75	44 x ¾.....	3.00	16 x ⅝.....	.85
30 x 1.....	4.25	42 x ¾.....	2.85	14 x ⅝.....	.75
26 x 1.....	3.75	38 x ¾.....	2.75	12 x ⅝.....	.60
60 x ⅞.....	6.50	34 x ¾.....	2.65		

CUSHIONED TIRES.

30 x 1¼.....$9.00	30 x 1.....$6.50	26 x 1.....$5.50
26 x 1¼..... 8.00	28 x 1..... 6.00	24 x 1..... 5.00

POINTS TO BE REMEMBERED.

TERMS, net cash with order.

ABSOLUTELY NO DISCOUNT, except to regular agents.

IN ORDERING ELECTROTYPES always use the catalogue number, and thus avoid liability to error. The number under each illustration is that of the electrotype, not of the article.

OUR PRICES are F. O. B. in Chicago or Boston.

EXPLICIT SHIPPING DIRECTIONS should accompany every order.

CORRESPONDENCE, other than that relating to New England trade (embracing Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut), should always be addressed to the factory and principal office in Chicago. Orders and communications from above states should be sent to our Boston house. Always address the firm, not individuals.

HALF-PRICE ONLY will be allowed for parts not taken when incomplete machines are ordered.

WE ARE NOT RESPONSIBLE for the safe delivery of goods beyond the postoffice, express offices, or freight depots.

GOODS SENT C. O. D. when a sufficient deposit accompanies the order to cover express charges both ways.

PARTIES, other than our regularly authorized agents, sending small orders for parts or sundries, must invariably send cash in advance, otherwise it will necessitate a request for the amount, the shipment being held pending the receipt of the remittance.

IN RETURNING MACHINES, or parts, to the factory, always tag them distinctly with the name and address of the sender, and notify us by letter of the date of shipment and by what Express or Railroad company sent. Charges must be prepaid on all returned goods.

REMITTANCES should be made by exchange on New York or Chicago, by Postoffice Order or by Express. We do not pay exchange.

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